ANNUAL SUMMARY

OF

BIRTHS, DEATHS, AND CAUSES OF DEATH

L HARY IN

LONDON

AND OTHER LARGE TOWNS,

WITH APPENDIX CONTAINING DR. FRANKLAND'S REPORT ON THE METROPOLITAN WATER SUPPLY,

1896.

PUBLISHED BY THE AUTHORITY OF THE REGISTRAR GENERAL OF BIRTHS, DEATHS, AND MARRIAGES IN ENGLAND.





LONDON:

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1897.

Price One Shilling and Sixpence.

REGISTRATION LONDON.*

- AREA.—The Area of Registration London is 77,389 acres, or 121 square miles, including 2717 acres of tidal water and foreshore; this is equal to 31,319 hectares, or 313 square kilometres. The Area of London being 121 square miles is equal to a square of 11 miles to the side. The length of the streets and roads in the County of London, as returned in 1882, was more than 1600 miles; and from that date to the end of 1896 a total length of 218 miles of new streets had been sanctioned.
- ELEVATION.—The population of London resides at a mean elevation of 60 feet (18.2 metres) above approximate mean water at Liverpool; the elevation varying from 1 foot (0.3 metre) in Plumstead Marshes, to 441 feet (134.4 metres) at Hampstead, above approximate mean water at Liverpool.
- Houses.—At the Census in 1891 there were within this area 544,977 inhabited houses, containing an average of 7.7 persons to a house, a slightly lower proportion than in 1871 and 1881.
- ANNUAL RATABLE VALUE. The Annual Ratable Value of Property within Registration London in 1891, as assessed in accordance with the Valuation (Metropolis) Act, 1869, was 32,932,9671.† (For Annual Ratable Value of Greater London in 1891, see Table 9.)
- Density (1896).—146 persons to a hectare; 59.2 to an acre; 37,900 to a square mile. (In these calculations no account is taken of tidal water and foreshore.)

1861-71. 1.016141 1871-81. AVERAGE ANNUAL RATE OF INCREASE OF POPULATION 1881-91. . 1.009928 1891-96. 1.009320

1896.

$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	121,955
Marriages	39,869
Persons Married	79,738
Annual Rate of Persons Married per 1000 of the Population	18.0
BIRTHS $\left\{ egin{array}{lll} ext{Males} & . & 69,536 \\ ext{Females} & . & 66,260 \end{array} \right\} ext{Persons.}$	35,796
Annual Rate of Births per 1000 of the Population	30.2
Deaths $\left\{ egin{array}{lll} ext{Males} & . & 43,069 \\ ext{Females} & . & 40,442 \end{array} \right\} ext{Persons}.$	83,511
ANNUAL RATE OF MORTALITY Males . 20.6 PERSONS. Females . 17.4 PERSONS.	18.6
Excess of Registered Births over Deaths	52,285
Estimated Increase of Population during the Year	41,025

^{*} Registration London is co-extensive with the Administrative County of London except that the lamlet or civil parish of Penge is excluded from Registration London, although forming part of the County of London. The facts concerning new streets and roads were supplied by the Clerk to the London County Council,

This information is derived from a return of the Gross and Ratable Value of Property in the

Metropolis issued by the London County Council.

ANNUAL SUMMARY.

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LONDON

OTHER LARGE TOWNS.

1896.

General Register Office, Somerset House, 12th March 1897.

The 33 Great Towns.

The estimated population of the thirty-three great towns of England and Wales in the middle of the year 1896 was 10.846.971. The births registered in the course of the 53 weeks ending 2nd January 1897 numbered 339,115, and were in the proportion of 30.7 per 1000 of the estimated population. The deaths registered within the same period were 208,584 in number, and corresponded to a rate of 18.9 per 1000 of the population. This rate was 2.0 per 1000 below the mean rate for the thirty-three great towns in the preceding ten years; and with one exception (that of 1894) was below the rate recorded in any one of these years.

The general death-rates in 1896, calculated without reference either to sex or to age, varied considerably in these great towns, ranging from 14.2 in the Borough of Croydon to 22.7 in the City of Liverpool as extended by the recent Act.

It has been pointed out, however, in previous Annual Summaries that, in " consequence of the great differences between one town and another with respect to the age and sex constitution of their several populations, these recorded rates require correction before they can be justly used for purposes of comparison. In Table A. of the present Summary factors are given by the use of which this correction can be made for each town with approximate accuracy. Applying these factors we have the corrected rates, which are given in the fourth column of that table. In the fifth column the death-rate for all England and Wales has been taken as 1000, and the corrected rate in each town has been reduced to a figure comparable with that number taken as a standard. This column may be read as follows: -After making approximate correction for differences of age and sex constitution, the same number of lives that in the year 1896 gave 1000 deaths in England and Wales as a whole, gave 1196 deaths in the thirty-three great towns, 867 in Croydon, 954 in Brighton, 974 in Norwich, 991 in Portsmouth, &c., &c., also 1460 in Liverpool, 1489 in Salford, and 1500 in Manchester.

Table A .- Recorded and Corrected Death-rates per 1000 Persons living in 33 Great Towns in 1896.

					The state of the state of
Towns, in the order of their Corrected Death-rates.	Standard Death-rate.*	Factor for Correction for Sex and Age Dis- tribution.†	Recorded Death-rate, 1896.	Corrected Death-rate, 1896.‡	Comparative Mortality Figure, 1896.§
Cols.	1.	2.	3.	- 4.	5.
	The second				
England and Wales -	19.15	1.0000	17-10	17.10	1000
England and Wales, less the 33 Towns}	19•45	0.9845	16.09	15.84	926
33 Towns	17.71	1.0813	18.91	20.45	1196
Croydon	18.37	1.0424	14.22	14.82	867
Brighton	18.94	1.0110	16.13	16.31	954
Norwich	19.99	0.9579	17.38	16.65	974
Portsmouth	18.73	1.0224	16.57	16.94	991
Derby	17.36	1.1031	15.65	17.26	1009
1001010101	11324				1000
West Ham	17.75	1.0788	16.07	17.34	1014
Bristol	18.33	1.0447	16.90	17.66	1033
Leicester	17.64	1.0855	16.72	18.15	1061
Swansea	17.53	1.0924	16.85	18.41	1077
Cardiff	17.16	1.1159	16.84	18.79	1099
Nottingham	17.81	1.0752	17.50	-18.82	1101
Bradford	16.73	1.1446	16.51	18.90	1105
Plymouth	19.70	0.9720	19.57	19.02	1112
Huddersfield	16.47	1.1627	16.47	19.15	1120
Halifax	17.20	1.1133	17.33	19.29	1128
London	17.97	1.0656	18.58	19.80	1158
Hull	18.23	1.0504	18.91	19.86	1161
Blackburn	17.05	1.1231	17.87	20.07	1174
Burnley	16.67	1.1487	17.51	20.11	1176
Newcastle	17.58	1.0892	18.46	20.11	1176
Gateshead	17.83	1.0740	19.09	20.50	1199
Leeds	17.28	1.1082	18.75	20.78	1215
Sunderland	18.25	1.0493	19.82	20.80	1216
Wolverhampton	18.30	1.0464	19.95	20.88	1221
Birkenhead	17.42	1.0993	19.19	21.10	1234
Sheffield	17:22	1.1120	19.26	21.42	1253
Preston	17.42	1.0993	20.76	22.82	1335
Birmingham	17:33	1.1050	20.81	23.00	1345
Oldham	16.72	1.1453	20.27	23.22	1358
Bolton	16.90	1.1331	20.73	23.49	1374
Liverpool	17.44	1.0980	22.74	24.97	1460
Salford	17.03	1.1244	22.64	25.46	1489
Manchester	16.90	1.1331	22.64	25.65	1500
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^{*} The Standard Death-rate signifies the death-rate at all ages calculated on the hypothesis that the rates at each of twelve age-periods in each town were the same as in England and Wales during the ten years 1881-90, the Death-rate at all ages in England and Wales during that period having been 19'15 per 1,000.

† The Factor for Correction is the figure by which the Recorded Death-rate should be multiplied in order to correct for variations of sex and age distribution.

† The Corrected Death-rate is the Recorded Death-rate multiplied by the Factor for Correction.

† The Comparative Mortality Figure represents the Corrected Death-rate in each town compared with the Recorded Death-rate at all ages in England and Wales in 1896, taken as 1000.

Particulars of the mortality during 1896 in each of the thirty-three great English towns are given in Tables 1 to 4.

Infantile mortality.—The 208,534 deaths at all ages include 56,768 deaths of infants during their first year of life. Infantile mortality, therefore, by which term is meant the proportion of deaths under one year to births registered, was equal to 167 per 1000 in the thirty-three great towns, and corresponded exactly with the average rate in the ten preceding years. The rate in 1896 was lowest, 135 per 1000 in Brighton, 142 in Bristol, 143 in Bradford, and 149 in Halifax. It ranged upwards through 187 in Leicester, 197 in Birmingham, and 199 in Salford, to the highest rate 203 per 1000 in Preston.

Amongst zymotic diseases, the mortality from measles, diphtheria, and whooping-cough showed an excess in the year 1896 as compared with the mean rate in the preceding decennium; whilst the mortality from small-pox, scarlet fever, fever, and diarrhoea was below the average.

There were in the thirty-three towns 25 deaths from *small-pox* last year, as compared with 120, 732, 450, and 120 respectively in the four preceding years. Of these 25 deaths, 9 occurred in London or in the Metropolitan Asylum Hospitals outside London, 5 in Bristol, 4 in West Ham, 3 in Cardiff, 2 in Swansea, and one each in Bradford and Leeds.

The mortality attributed to measles was equal to a rate of 0.71 per 1000, against an average rate of 0.60 in the preceding ten years. The lowest rates were 0.03 in Preston, 0.05 in Bolton, and 0.06 in Swansea; the highest rates were 1.06 in Norwich and in Manchester, 1.15 in Oldham, 1.16 in Hull, and 1.37 in Gateshead.

Scarlet fever caused a mortality equal to 0.22 per 1000, as compared with a decennial average of 0.27. No death was registered from this disease during the year in Halifax, and the rates of death did not exceed 0.03 in Plymouth, and 0.04 in Croydon, Swansea, Norwich, and Burnley; the highest rates were 0.35 in Liverpool, 0.37 in Manchester, 0.38 in Oldham, and 0.49 in Salford.

The mortality ascribed to diphtheria was equal to a rate of 0.38 per 1000, against a decennial average of 0.27. The rate in 1896 slightly exceeded that in the preceding year. Excluding London, where the rate was equal to 0.60 per 1000, the rate in the great English towns did not exceed 0.23 per 1000; it ranged from 0.06 in Nottingham and in Sunderland, 0.07 in Bradford, and 0.08 in Blackburn, to 0.46 in Burnley, 0.53 in Birmingham, 0.60 in Wolverhampton, and 0.70 in West Ham.

Whooping-cough gave rise to a death-rate of 0.57 per 1000 during the year, or 0.02 above the average rate. The lowest rates were 0.08 in Norwich, 0.19 in Plymouth, and 0.25 in Leicester: and the highest rates, 0.67 in Manchester, 0.74 in Birmingham, 0.83 in Bolton, and 0.88 in Salford.

Continued fevers, mainly enteric, gave rise to a mortality equal to a rate of 0·19 per 1000, or 0·02 below the average. The lowest rates were 0·07 in Plymouth, 0·08 in Bristol and in Cardiff, and 0·11 in Brighton; the highest being 0·34 in Nottingham, 0·37 in Sunderland, 0·39 in Bolton, and 0·41 in Wolverhampton.

Diarrhæa caused a mortality equal to a rate of 0.79 per 1000, or 0.09 below the decennial average. The lowest rates were 0.16 in Halifax, 0.25 in Swansea, and 0.26 in Huddersfield; the highest were 1.16 in Liverpool, 1.20 in Birmingham, 1.23 in Salford, 1.35 in Leicester, and 1.41 in Wolverhampton.

The highest aggregate rates from the seven zymotic diseases were 3.32 in Hull, 3.42 in Manchester, 3.57 in Birmingham, and 4.10 in Salford.

Uncertified Causes of Death.—Of the 208,534 deaths registered during the year, 3147, or 1.5 per cent., were not certified. In London the proportion did not exceed

0.6 per cent., whilst it averaged 2.1 in the thirty-two other great towns. As had been the case in the previous four years also, no uncertified death was registered during 1896 in Croydon. Amongst the other great towns the lowest proportions of uncertified deaths were 0.3 in Bolton and in Oidham, 0.4 in Derby, and 0.5 in Plymouth and in Newcastle-on-Tyne; the highest proportions were 3.5 in Sheffield, 3.7 in West Ham, 4.3 in Preston, and 5.0 in Birmingham.

LONDON.

MARRIAGES.

The marriages in London during the year 1896 numbered 39,869, and the proportion of persons married was 18 0 per 1000 of the population; this is the highest rate recorded in any year since 1883.

BIRTHS.

In the course of the year 135,796 births were registered, giving a rate of 30.22 per 1000 of the population. This is the lowest London birth rate on record. The natural increment of the population, by excess of births over deaths, was 52,285, the average increment in the ten preceding years having been 48,024 per annum.

DEATHS.

The deaths in the year 1896 numbered 83,511, and corresponded to a rate of 18.6 per 1000 of the population, the average death-rate in the previous ten years having been 20.1. With the exception of the rates in the years 1889 and 1894, the rate in 1896 was the lowest hitherto recorded.

The 83,511 registered deaths include 1651 of Londoners which took place in Metropolitan Institutions outside the limits of Registration London, and also 1790 deaths of strangers who had been admitted into London Hospitals and Infirmaries from districts outside these boundaries. By excluding the deaths of persons ascertained to have been strangers, the death-rate of London is reduced to 18.2 per 1000.

CORRECTED MORTALITY OF LONDON SANITARY AREAS.

The rates of mortality in the sanitary areas of the Metropolis, when calculated on the deaths locally registered, convey very erroneous ideas of the relative healthiness of these areas.

The presence of hospitals, workhouses, and other large public institutions in certain parts of London unduly raises the recorded death-rate of the areas in which they are situated, whilst the mortality of other areas, from which patients have migrated to those institutions, is correspondingly lowered. Until the deaths occurring in public institutions have been distributed to the sanitary areas from which the patients originally came, no reliable rates of mortality for these areas can be calculated.

In Table 21 the deaths in 1896 are shown, after due correction for institution mortality, and in Table 22 the deaths have been reduced to annual rates per 1000 of the several estimated populations. The rates for metropolitan sanitary areas are now published for the first time; the establishment of a quinquennial census for London having rendered it possible to form estimates of population from year to year which may perhaps be regarded as sufficiently accurate for this purpose. Some of the London sanitary areas afford striking examples of the necessity for such distribution. This is shown by the following table, which gives the registered deathrates from certain diseases side by side with the corrected rates of each of the sanitary areas.

Table B.—Deaths-rates during 1896 in London and its Sanitary Areas from All Causes, and from certain diseases (1) as registered, and (2) after Distribution of Deaths in Public Institutions.

the best than encething	30F 39	0.55	DEATE	I-RATE P	ER 1000 I	iving.	di att	A POPULAR TO A POP
SANITARY AREAS.	All C	auses.	Scarlet	Fever.	Dipht	theria.	Pht	hisis.
on extreme, the extreme of the state of the	As Regis- tered.	After Correc- tion.	As Regis- tered.	After Correc- tion.	As Regis- tered.	After Correc- tion.	As Regis- tered.	After Correc- tion.
REGISTRATION LONDON -	18.6	18.2	0.21	0.51	0:60	0.59	1.73	-1168
West was	I male	David 30					nd all bo	Birtino.
West.	16.5	15'3	0.06	0.17	0.33	0,21	1.27	1.27
Kensington -	18.2	16.8	0.05	0.23	0.55	0.40	2.35	1'42
Hammersmith	14.6	17.2	0.09	0°20	0.34	0.49	1.12	1'40
Fulham	20.3	17.6	0.85	0°25	1.71	0.66	1.73	1.66
Chelsea	19.4	18.8	0.07	0'23	0.21	1.17	2.53	1.82
St. George Hanover Square -	18.9	13.6	0.04	0'14	0.38	0.30	2.13	1 28
St. Margaret & St. John Wstmnstr.	15.3	18.0	0.02	0,18	0.26	0.37	1.12	2.24
St. James Westminster -	14.8	17.0	0:04	0.13	0.09	0.00	1.20	1.89
North.	ALLE STATE	11.1.6	1000	The said of		100		The state of
St. Marylebone	17.4	19.9	0.03	0.18	0.26	0.2	1.21	1.95
Hampstead	16.9	11.0	1.22	0.00	3.24	0°39	1.96	1.13
St. Pancras	18.5	18.1	0.08	0.12	0.30	0.40	2.12	1:93
Islington -	16.7	17.1	0.08	0.17	0.41	0.74	1.69	1'45
Stoke Newington	11.2	12.7	0.18	0.23	0.20	0.26	0.70	0.82
Hackney	17.0	15.7	0.44	0.17	0.85	0.47	1.50	1.41
Central.						134 30		13873
St. Giles	15.0	10'0		0.18	0.05	0.18	2.50	2.01
St. Martin-in-the-Fields	25.6	16.2	0.15	0'23	0.30	0.23	2.42	1.97
Strand	23'1	22.7	0.04	0°25	0.17	0'12	2.11	2.89
Holborn	25.3	23.4	10 % TON	WILLIE.	0.92	0.38	2.83	3.24
Clerkenwell	13.9	20'7	0.07	0'22	0.27	0.63	1.25	2.16
St. Luke	17.3	25°1	0.12	0.20	0.24	0.62	2.13	2.03
City of London	34.5	19.6	0.09	0'22	1:13	0'34	2.23	1.60
East.	801 1	ristagus		MI ogen		Lie Test		weller
Shoreditch -	21.2	31.4	0.10	0.31	0.36	0.60	1.71	1.87
Bethnal Green	20.7	22'1	0.14	0°27	0.36	0°57	2.18	1.80
Whitechapel	29.4	20.6	0.02	0°25	0.77	0.00	2.57	2,41
St. George-in-the-East	19.8	24.5	0.17	0.37	0.51	0.62	2.25	2 56
Limehouse	20.4	22°9	0.10	0°25	0.74	0.83	1.37	2 24
Mile End Old Town	17.7	19.9	0.13	0.30	0.41	0.86	1.53	1.38
Poplar	21.1	20.6	0.09	0,10	0.46	0.01	1.97	1.42
South.	A sup-	TOSO!	QUICE O	SHIP DI	and the same of	1 50 Feb 3	10-12	DE SHIP
St. Saviour	15.2	22.8	0.04	0,10	0.12	0.40	1.44	3,11
St. Geothe-Martyr, Southwark	18.8	24'0	0.02	0°28	0.41	0.65	1.29	2.69
Newington	15.3	20°5	0.09	0°24	0.31	0*58	1.10	1,00
St. Olave	70.1	22.0	0087	0.42	1.52	0.46	5.23	2,19
Bermondsey	16.7	21.6	0.07	0°23	0.49	0.84	1.33	2.03
Rotherhithe	23.8	20°3	0.10	0.24	0.49	0.63	8.29	2'19
Lambeth all of holl-like a	17.8	16.9	0.33	0°22	0.66	0.46	1.26	1.63
Battersea	17:4	8 17.7	0.03	0,10	0.30	0'49	1'44	1'44
Wandsworth	13.8	14'3	0.24	0.12	1.05	0.31	0.77	0'97
Camberwell	18.8	17.8	0.08	0°20	0.67	1,01	2.13	1'54
Greenwich	19.0	18.2	0.24	0.38	1.25	0.48	1.56	1.57
Leen- ann-amort- usu - and-	16.3	13'4	0.74	0'20	1 27	0°43	1'42	1°27
Lewisham (excluding Penge)	12.6	14'3	0.04	0.08	0.40	0.88	0.93	1'04
Woolwich	16.3	20.2	0.02	0'21	0.36	0'74	1.38	2.09
Plumstead	16.2	15.4	0.15	0.30	0.29	0,01	1.67	1.32
	133	1		14 17				

Thus in St. Olave, for instance, in which sanitary area Guy's Hospital is situated, the registered deaths in 1896 numbered 832, and were equal to a rate of 70·1 per 1000 of the population; but after distribution of the deaths occurring in public institutions only 261 deaths remained as properly belonging to St. Olave sanitary area. In this case the *corrected* rate is 22·0 per 1000, or less than one-third of the uncorrected rate.

Again, the sanitary area comprising the City of London contains, amongst other public institutions, St. Bartholomew's Hospital and the City Workhouse. The deaths registered in the City during 1896 numbered 1101; but of these 717 occurred in public institutions, most of which were of persons belonging to other sanitary areas, and several deaths of residents of the City of London occurred in institutions outside its boundaries. After distribution of these deaths the number belonging to the City of London is found to be 626. The uncorrected death-rate of the City of London in 1896 therefore stood at 34.5 per 1000, whilst the corrected rate did not exceed 19.6.

On the other hand, in the sanitary area of Bermondsey only 1449 deaths were registered during the year 1896, but when the deaths of Bermondsey residents which took place in public institutions outside the boundaries of that area are taken into account, the death total is raised from 1449 to 1873, and the death-rate from 16·7 per 1000 of the population to 21·6. In like manner the death-rate of St. George-in-the-East is raised from 19·8 to 24·5; that of St. Saviour from 15·2 to 22·8; that of St. George Southwark from 18·8 to 24·0; and that of Newington from 15·3 to 20·5.

Infantile Mortality.—The total deaths at all ages include those of 21,853 infants under one year of age, corresponding to a rate of 161 per 1000 births, as compared with an average rate of 155 in the ten years immediately preceding.

After distribution of the deaths occurring in public institutions the incidence of infantile mortality upon the various sanitary areas of the Metropolis was as follows: the lowest rates were 123 in Hampstead, 126 in Stoke Newington, 133 in Plumstead, 136 in Lewisham and in Lambeth, and 137 in the City of London; the highest rates were 181 in St. George Southwark, 184 in Clerkenwell and in Newington, 193 in the Strand, 194 in Holborn, and 213 in St. Saviour.

Causes of Death.—Table C. on the following page shows, in a summary form, the number of lives saved and the number lost in the year 1896, as compared with the preceding decennium, under each of the more important headings in the list of causes.

The net gain in life saved during 1896 was represented by 6854 lives. In other words, had the average death-rate in 1886-95 continued throughout the year under present notice, 6854 lives would have been sacrificed in addition to those which have been actually lost by death. In the year 1896 there was, as compared with the decennial average, an excess of 938 deaths from measles, 797 from diphtheria, 256 from whooping-cough, 107 from diarrheal disease, 483 from cancer, 151 from premature birth, and 108 from accident. Under each of the other headings in the table the mortality in 1896 was below the average. This was notably the case in regard to diseases of the respiratory system, the deaths referred to which were 5030 below the annual average.

Table C.—London.—Diminution or Excess of Deaths in 1896, compared with the Average Annual Deaths in 1886-95, corrected for increase of Population.

7		-			
-	CAUSE OF DEATH.		Diminution in 1896.	Excess in 1896.	
-	Small-pox	-	39	1999 2 3 40	
1	Measles	-	Total of	938	
	Scarlet Fever	-	146	- 119-119-1	
-	Typhus	-3	6	A -	
1	Influenza	-	543	3 -0.00	
	Whooping-cough -	-	100-110	256	
1	Diphtheria		A CONTRACTOR	797	
-	Simple Fever	-	23	A TEN	
	Enteric Fever	-	50	-	
-	Diarrhœal Diseases	-	-	107	
	Cancer	1-3	The state of the s	483	
	Phthisis and other Tubercular Diseases	-	1,301	A A STATE OF THE S	
-	Premature Birth	-	1	151	
	Diseases of Nervous System -	-	1,348	-	
-	Diseases of Circulatory System -	1	307		
1	Diseases of Respiratory System -	-	5,030	12 1-1100	
	Diseases of Urinary System -	-	37	100 -	
-	Childbirth and Puerperal Fever -	-	26	-	
1	Accident	-	-	108	
	Homicide	1	5	1 - 4	
-	Suicide	1-	24	11 11 11 11	
-	All other Causes	- ·	809	-	
			0.604	0.040	
-			9,694	2,840	
-	Balance of Diminution or Excess -	-	6,854	2 4 1 2 1 1 1 1 1 1 1 1	

Influenza.—The deaths referred to influenza in the course of 1896 amounted to 496, a number which is considerably smaller than in any year since 1890, the first year of the epidemic in London. The deaths from influenza in 1896 did not exceed 26 per cent. of the average annual number in the six years ending with 1895.

Small-pox was the registered cause of 9 deaths during 1896, as against 206, 89, and 55 respectively in the three preceding years. Of the 9 deaths registered in the year under present notice, 4 were those of unvaccinated persons, and with respect to the remaining 5, no statement as to vaccination was made in the certificates. No death of a vaccinated person is known to have occurred during 1896. Of the total deaths, 2 belonged to Lambeth, 2 to Greenwich, and 1 each to Paddington, Islington, Holborn, Shoreditch, and Newington sanitary areas.

Measles was the certified cause of 3697 deaths during the year; these deaths being equal to a rate of 0.82 per 1000 as compared with 0.61, the decennial average rate. In London, measles appears to have been more fatal last year than in any previous year on record, with the single exception of the year 1864. Amongst metropolitan sanitary areas the lowest rates were 0.15 in Stoke Newington, 0.19

in the City of London, and 0.33 in St. Margaret Westminster; the highest rates were 1.26 in St. George Southwark, 1.33 in St. James Westminster, 1.36 in St. Marylebone, and 1.71 in Woolwich.

Scarlet Fever caused 942 deaths, equal to 0.21 per 1000 of the population, in the year under present notice, as compared with 0.24, the average rate in the ten years immediately preceding. Of these 942 deaths, 644, or 68 per cent., occurred in public institutions. No fatal case of scarlet fever was registered during the quarter as belonging to the sanitary area of Holborn. Among the other sanitary areas the lowest scarlet fever death-rates, after distribution of institution deaths, were 0.08 per 1000 in Lewisham, 0.09 in Hampstead, 0.13 in St. James Westminster, and 0.14 in St. George Hanover Square; the highest death-rates from this disease were 0.31 per 1000 in Shoreditch, 0.37 in St. George-in-the-East, 0.42 in St. Olave, and 0.50 in St. Luke.

Table B. (p. vii) shows that correction for deaths occurring in fever hospitals has the effect of completely altering the scarlet fever mortality of many of the metropolitan sanitary areas. The scarlet fever death-rate of Hampstead, for example, which district suffered but slightly from scarlet fever, would have been increased thirteen-fold if the hospital deaths had not been assigned to the areas to which they actually belonged. The scarlet fever rates both of Fulham and of Lee would also have been increased more than threefold under the same circumstances. Reference to the table shows that distribution has had the effect of considerably raising the scarlet fever mortality of most of the other sanitary areas-of London.

Diphtheria was the assigned cause of 2633 deaths in the course the year 1896. These deaths were equal to a rate of 0.60 per 1000, against rates of 0.76, 0.62, and 0.54 per 1000 in the three previous years.

The London death-rate from diphtheria in 1896 considerably exceeded the average rate in the ten years 1886-95, which had been 0.41 per 1000. The deaths from diphtheria and croup together numbered 2830, and were 538 above the average. The local mortality from diphtheria is very seriously disturbed by the existence of hospitals in certain of the areas. In Hampstead, for example, 250 deaths from diphtheria were registered in 1896; most of these occurred in the Metropolitan Asylums Board Hospital, to which the patients had been admitted from other districts, and, after distribution of institution deaths, only 30 were of persons belonging to Hampstead sanitary area. Similarly, in Fulham sanitary area 200 deaths from diphtheria were registered, most of these being hospital cases imported from outside districts, and only 77 properly belonged to Fulham. Hackney, City of London, Holborn, St. Olave, Wandsworth, Greenwich, and Lee are also instances of sanitary areas whose registered death-rates from diphtheria have been enormously increased by the presence of hospitals. On the other hand, Chelsea, Clerkenwell, St. Luke, St. George-in-the-East, Mile End Old Town, St. Saviour Southwark, Bermondsey, Camberwell, Lewisham, and Woolwich, may be mentioned as examples of the opposite kind, where the effect of distribution has been to greatly increase the diphtheria death-rates of those areas by the inclusion of deaths occurring in hospitals outside their own boundaries.

Among London sanitary areas the lowest death-rates from diphtheria, after distribution of institution deaths, were 0.09 in St. James Westminster, 0.12 in Strand, 0.18 in St. Giles, and 0.21 in Wandsworth; the highest rates were 0.83 in Limehouse, 0.84 in Bermondsey, 0.86 in Mile End Old Town, 0.88 in Lewisham, 0.91 in Plumstead, 1.01 in Camberwell, and 1.17 in Chelsea.

The following table shows the death-rates from diphtheria in each of the London sanitary areas from the year 1887 to 1896.

TABLE D.—DEATH-RATES from DIPHTHERIA, per 1000 LIVING, in each of the METROPOLITAN SANITARY AREAS during the TEN YEARS 1887-96, after distribution of DEATHS in PUBLIC INSTITUTIONS.

63 Amma					Ye	ar.				
SANITARY AREAS.	1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
REGISTRATION LONDON.	0.53	0.31	0.38	0.33	0.35	0.44	0.75	0.61	0.25	0°59
West.										
Paddington , + , , +	0.26	0.66	0.36	0.34	0.50	0.23	0.58	0.76	0.38	0.21
Kensington	0.24	0.55	0.67	0.50	0.17	0.50	0.49	0*46 .	0.23	0.40
Hammersmith	0.21	0.42	0.49	0.21	0.75	0.74	0.23	0.49	0.43	0.49
Fulham - '- '-	0.26	0.13	0.12	0.22	0.51	0.35	0.63	0.99	0.40	0.66
Chelsea	0.50	0.12	0.25	0.28	0.17	0.41	0.24	0.54	0.20	1.17
St. George Hanover Square.	0.16	0.26	0.37	0.16	0.26	0.33	0°43	0°24	0.30	0.30
St. Margaret and St. John Westminster.	0°44	0.65	0.20	0.16	0.50	0.80	0.26	0°48	0.39	0.37
St. James Westminster North.	0.11	0.19	0.08	0.15	0.58	0°25	C.28	0.63	0.17	0.09
North. St. Marylebone	0.10	0.16	0.53	0.19	0.18	0.34	0.66	0.21	0.05	0.2
Hampstead • •	0.55	0.76	0.13	0.31	0.19	0.39	0.23	0.27	0.25	0.39
St. Pancras	0.22	0.31	0.26	0.22	0.30	0.45	0.85	0.21	0.22	0.40
Islington -	0.12	0.16	0.50	0.25	0.20	0.47	0.61	0.67	0.44	0.74
Stoke Newington -	1						-	0.12	0.12	0.29
Hackney	} 0.19	0.35	0*44	0.59	0.34	0.26	0.87 {	0.25	0.39	0.47
Central.										
St. Giles	0.55	0.27	0.42	0.24	0.30	0.23	0.56	0.36	0.34	0.18
St. Martin-in-the Fields	0.32	0.19	0.13	0.07	0.28	0.84	0.58	0.44	0.53	0.23
Strand	0.36	0.11	0.30	0.12	0.50	0.32	0.90	0.37	0.24	0.15
Holborn - Fig	0.26	0.14	0.49	0.25	0.27	0.52	0.68	0.63	0.55	0.38
Clerkenwell	0.25	0.39	0.36	0.58	0.42	0.42	1.15	0.21	0.21	0.62
St. Luke - • •	0.27	0.53	0.30	0.37	0:28	0.33	1.10	0.36	0.48	0.62
City of London -	0.15	0.27	0.30	0.58	0.34	0.66	0.31	0.18	0.54	0.34
East:										
Shoreditch	0.55	0.56	0.26	0.46	0.23	0.36	1.11	0.61	0.47	0.60
Bethnal Green -	0.51	0.41	0.49	0.88	0.47	0.91	1.06	1.03	0.48	0.57
Whitechapel • -	0.08	0.33	0.46	0.68	0.73	0.78	0.80	.0.60	0.75	0.60
St. George-in-the-East	0.33	0.33	0.94	0.65	0.42	0.72	1.34	1.09	1.06	0.62
Limehouse - *	0.24	0.43	0.85	0.48	0.58	0.44	1.06	0.88	0.78	0.83
Mile End Old Town • Poplar • •	0.18	0°19 0°26	0.39	0.40	0 34	0.75	1.00	0.4	0.90	0.86
South.										
St. Saviour	0.59	0.47	0.44	0.18	0.41	0.22	0.65	0.77	0.21	0.70
St. George the Martyr, Southwark.	0.50	0.39	0.34	0.53	0.30	0.44	0.75	0.85	0.58	0.65
Newington	0.54	0.16	0'48	0.27	0.38	0.33	0.79	0.21	0.43	0.28
St. Olave	0.16	0.35	0.08	0.31	0.40	0*24	0.57	0.25	0.34	0.76
Bermondsey • •	0.19	0.16	0.27	0.55	0.19	0.24	0.94	0.48	0.34	0.84
Rotherhithe - •	0.16	0.51	0.42	0.50	0.10	0.58	0.48	0.78	0.77	0.63
Lambeth - :	0.39	0.40	0.28	0.527	0.58	0.47	0.65	0.49	0.38	0.46
Battersea - · ·	0.19	0.50	0.53	0.52	0.46	0.32	1.07	0.73	0.57	0.49
Wandsworth		0.46	0.20	0.14	0.53	0.40	0.67	0.45	0.25	0.51
Camberwell	0.30	0.53	0.31	0.22	0.50	0.33	0.24	0.48	0.72	1.01
Greenwich	0.24	0.22	0°19	0.58	0.58	0.31	0.87	0 '77	1.06	0.48
Lee* * •	0.23	0.14	0.14	0.14	0.08	0.16	0°54	0.26	0.59	0.43
Lewisham (ex. Penge) -	0.17	0.47	0.02	0.21	0.11	0.27	0.69	0.38	0.17	0.88
Woolwich	0.08	0.08	0.12	0.13	0.02	0.10	0.50	0.34	0.34	0.4
Plumstead*	0.25	0.41	0.27	0.27	0.11	0.70	1.18	0.64	0.62	0.91

^{*} The rates for Lee and Plumstead for all the years relate to those sanitary areas as constituted on 25th March 1894.

Whooping-cough was the assigned cause of 2937 deaths during 1896. The whooping-cough death-rate was therefore equal to 0.65 per 1000, and considerably exceeded the rate in any recent year. The mean rate in the ten years 1886-95 was 0.60 per 1000. Amongst sanitary areas the lowest death-rates from this disease were 0.13 in St. James Westminster, 0.20 in St. George Hanover Square, 0.22 in City of London, and 0.29 in Hampstead; the highest rates were 1.01 in Shoreditch, 1.03 in Limehouse, 1.10 in St. Olave, 1.12 in Bermondsey, and 1.22 in Bethnal Green.

Enteric fever was the registered cause of 591 deaths, typhus of 5, and simple or ill-defined continued fever of 13 deaths. Thus, to continued fevers (referred to in the aggregate as "fever") 609 deaths were classed in the course of the year. These deaths were equal to a rate of 0·14 per 1000, which showed a slight further decline from the rates in recent years, and was slightly below the average rate (0·15) in the ten years 1886-95. Among sanitary areas the lowest enteric fever death-rates were 0·04 in Strand and in St. Saviour Southwark, 0·05 in Limehouse, in Lee, and in Woolwich, and 0·07 in Plumstead; the highest rates were 0·22 in Clerkenwell, 0·23 in St. Martin-in-the-Fields, 0·27 in Rotherhithe, and 0·31 in City of London.

The following table shows the admissions into the Metropolitan Asylums Board Hospitals, the Highgate Small-pox Hospital, and the London-Fever Hospital, together with the deaths therein, of small-pox, scarlet fever, diphtheria, and enteric fever patients during the ten years 1887–96:—

Table E. — LONDON. — Admissions and Deaths at the Metropolitan Asylums Board Hospitals, the Highgate Small-pox Hospital, and the London Fever Hospital, of Persons suffering from Small-pox, Scarlet Fever, Diphtheria, and Enteric Fever, 1887-1896.

Years.	Small-p	00 % .	Scarlet F	ever.	Diphth	eria.	Enteric Fever.		
i ears.	Admissions.	Deaths.	Admissions. Deaths		Admissions. Deaths.		Admissions.	Deaths.	
1887	. 59	3	6662	516	18	4	458	. 62	
1888 -	66	8	4881	514	1111	50	461	73	
1889	7		4837	370	740	278	311	. 42	
1890	25	. 4.	6991	521	965	317	518	95	
1891	67	8	5601	360	1330	- 399	. 759	108	
1892	366	38	13,686	850	2021	584	430	65	
1893	2546	190	15,312	918	2853	866	544	110	
1894	1226	. 108	11,892	725	3691	1041	538	96	
1895	971	65	11,800	601	3688	824	661	119	
1896	211	8	16,627	674	4580	956	600	96	

Diarrhæa was returned as the cause of 3223 deaths, which were equal to a rate of 0.72 per 1000. This rate, although lower than the high rate of the preceding year, was slightly in excess of the average rate in the preceding ten years, which had been 0.70 per 1000. Among sanitary areas the death-rates from diarrhæa ranged from 0.16 in City of London, 0.22 in Hampstead, 0.25 in

St. George Hanover Square, and 0.35 in Kensington, to 1.15 in Fulham, 1.23 in St. Luke, 1.24 in St. George-in-the-East, 1.31 in Clerkenwell, and 1.43 in St. Olave.

Hydrophobia was returned as the cause of death in 4 cases during the year, which is the highest number recorded in London in any year since 1889.

Phthisis was the assigned cause of 7778 deaths in the year 1896, against an average of 8629 deaths in the ten years 1886-95. The phthisis death-rate in Registration London was equal to 1.73 per 1000, as compared with rates of 1.74 and 1.83 respectively in the two years immediately preceding. Some of the London sanitary areas afford striking testimony as to the necessity of distributing institution deaths from phthisis, in order to arrive at a fairly reliable measure of local mortality from that disease. Thus, for example, in Kensington, which area contains the Marylebone Infirmary and part of the Brompton Hospital for Consumption, 407 deaths from phthisis were registered during the year under notice; but it was found on examination of the entries relating to these 407 deaths, that nearly one-half of them were of non-residents which had taken place in Kensington public institutions. After distribution of these deaths to districts from which the patients had been removed to hospital, the Kensington death-rate from phthisis was reduced from 2.35 per 1000 to 1.42 per 1000. St. Olave is another sanitary area which is similarly in point. This area contains Guy's Hospital, the deaths of outsiders occurring in which had the effect of raising the registered phthisis deathrate of St. Olave by 3.04 per 1000 in excess of the true rate. On the other hand, St. Margaret Westminster, Clerkenwell, Limehouse, St. Saviour, St. George Southwark, and Newington are examples of sanitary areas, the phthisis death-rates of which have been very considerably increased by the apportionment thereto of deaths from phthisis which had occurred in hospitals outside their own boundaries. After distribution of the phthisis deaths as above-mentioned, the death-rates from that disease in the metropolitan sanitary areas ranged from 0.82 in Stoke Newington. 0.97 in Wandsworth, 1.04 in Lewisham, 1.12 in Hampstead, and 1.27 in Paddington and in Lee, to 2.89 in Strand, 2.91 in St. Giles, 2.92 in St. Luke. 3.11 in St. Saviour, and 3.24 in Holborn.

The deaths in London attributed to violence numbered 3439 in the year under notice, as against 3355, the corrected average number. The deaths from suicide numbered 426, and were 24 in defect of the average. The deaths from homicide numbered 70, or 5 below the average. There were 7 executions during the year. Of the 2936 deaths from accident, 300 were caused by horses and vehicles in the streets, a number which is above the corrected average by 19. As mentioned in previous summaries, the deaths here returned as caused by vehicles and horses are probably far from representing the total mortality thus caused, many deaths thus caused being registered under such indefinite headings as "fractures," &c.

The following table shows the numbers of deaths caused by the various descriptions of vehicles, the largest number, as usual, appearing under the heading "Van, waggon, dray":—

Table F.—London.—Deaths caused by Horses and Vehicles in the Streets, 1873-96.

					Desc	ription o	of Vehic	le, &c.			
	Year.		Horse, &c.	Carriage.	Omnibus.	Tram-car.	Cab.	Cart.	Van,waggon, dray.	Others, and not described.	TOTAL.
1873		-	13	10	12	17	28	56	79	, 2	217
1874	-	-	28	11	17	14	33	36	67	5	211
1875	-	-	11	15	18	9	39	55	82	2	231
1876	-	-	13	4	17	12	24	56	84	7	217
1877			16	13	13	4	26	56	97	2	227
1878	<u>-</u>	-	17	12	14	10	34	63	84	3	237
1879	-	-	16	13	17	18	36	57	74	5	236
1880	-	-	12	11	20	17	39	43	76	2	220
1881		-	13	14	21	23	31	58	88	4	252
1882		-	12	15	19	23	37	60	100	- 5	271
1883	-	-	6	12	16	25	57	45	57	4	222
1884	-	-	12	11	33	18	57	51	74	9	. 265
1885	-	-	12	20	14	11	55	55	89	10	266
1886	-	-	10	7	21	9	39	49	111	5	251
1887	-	-	13	7	18	19	51	49	85	9	251
1888	-	-	5	15	25	9	41	47	91	4	237
1889	-	-	15	10	29	12	52	40	83	13	254
1890	-	-	3	11	22	18	43	44	109	20	270
1891	-	-	9	10	18	12	35	38	111	11	244
1892	-	-	17	15	26	11	44	47	101	8	269
1893	-	-	21	7	2 8	16	42	. 48	109	33	304
1894	-	-	17	10	24	13	35	46	86	24	255
1895		-	12	12	34	12	34	43*	117	27	291*
1896	-	-	13	15	30	17	51	33	117	19	300
1											

^{*} Including one case in which a verdict of "Manslaughter" was returned.

Of the total deaths at all ages attributed to accident or negligence, 626 were those of infants under one year of age who had been suffocated in bed, the numbers so returned in the preceding year having been 610. Of the 70 deaths by homicide, as many as 30 were those of infants under one year of age.

Deaths in Workhouses, Hospitals, and Public Lunatic and Imbecile Asylums.

—Of the 83,511 deaths registered in the year under notice, 23,178, or 27.8 percent., took place in public institutions. The percentages in the several classes of institutions were as follow:—

13.5 per cent. in Workhouses and Workhouse Infirmaries.

2.2 ,, ,, in Metropolitan Asylums Board Hospitals.

10.1 ,, in other Hospitals.

2.0 , in Public Lunatic and Imbecile Asylums.

Thus, in London, about one in every 7 deaths occurred in a Workhouse or Workhouse Infirmary, one in 45 in a Metropolitan Asylums Board Hospital, one in 10 in some other Hospital, and one in 50 in a Public Lunatic or Imbecile Asylum.

Table G.—London.--Deaths in Public Institutions and Proportion of Pauperism, 1987-96.

		1887.	1888.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896.
	Deaths in Public Institutions -	18,255	18,858	18,869	21,881	23,052	22,260	24,598	22,117	23,282	23,178
	Metropolitan Asylums Board Hospitals (in and out of London)	624	683	729	1,019	973	1,650	2,163	2,066	1,669	1,839
١	Other Hospitals -	6,972	7,093	7,054	7,717	8,008	7,686	8,794	7,903	8,182	8,468
ı	Lunatic and Imbecile Asylums* }	1,374	1,479	1,583	. 1,882	1,598	1,686	1,621	1,737	1,776	1,688
	Workhouses and Work- house Infirmaries† -}	9,285	9,603	9,503	11,263	12,478	11,238	12,020	10,411	11,655	11,183
-	Proportion of persons in receipt of Poor Law Relief, per 1000 population Out-door	13.9	14.1	14.0	13.7	13.2	13.7	14.2	14.5	14°8 9°8	14°5 8°5

^{*} Including the City of London, London County, and Metropolitan Lunatic and Imbecile Asylums situated outside Registration London.

Uncertified Causes of Death.—Of the 83,511 deaths registered in London during the year, 540, or 0.6 per cent., were uncertified, showing a further decline from the proportions in recent years.

GREATER LONDON.—The estimated population of Greater London, which is co-extensive with the Metropolitan and City Police Districts, was 6,178,376 in the middle of the year 1896, including 4,421,955 in Inner or Registration London, and 1,756,421 in the Outer Ring. The mortality among the inhabitants of the entire area was at the rate of 17.0 per 1000, as compared with 19.7, 16.4, and 18.3 in the three preceding years respectively. In Inner, or Registration, London, the mortality was at the rate of 18.6 per 1000, while in the Outer Ring it did not

⁺ Including the Islington and the Strand Union Workhouses at Edmonton, and the Holborn Union Workhouse at Mitcham.

exceed 13.1. Infantile mortality in Greater London was at the rate of 155 per 1000 births, as compared with 158, 138, and 159 in the three preceding years. The proportion in Inner London was 161, and in the Outer Ring 140, per 1000 births.

The Sixty-seven other Large Towns.

In the middle of the year 1896, the 67 English and Welsh towns included in Table 5 contained a population estimated at 3,722,413. The births registered in these towns in the course of the year numbered 112,477, and were in the proportion of 30·1 per 1000 of the population, against 31·1 in the year 1895. The deaths registered in the course of the year were 64,454 in number, and corresponded to a rate of 17·3 per 1000 persons living, or 1·4 below the rate of the year immediately preceding.

The death-rates in the several towns, calculated without reference either to sex or to age, varied considerably. They ranged from 9.6 in Hornsey, 9.8 in East-bourne, 10.3 in Bournemouth, and 11.8 in Walthamstow, to 22.9 in Hanley, 23.1 in Longton, 23.8 in Wigan, and 27.0 in Gloucester.

Particulars of the mortality during 1896 in the 67 towns here referred to are given in Tables 5 and 6.

Infantile mortality.—The 64,454 deaths at all ages registered in the 67 towns included 18,133 of children under one year of age. Infantile mortality, or the proportion of deaths under one year of age to registered births, was therefore equal to 161 per 1000. The rates ranged from 105 in Hornsey, 109 in Eastbourne, 112 in Bournemouth, and 115 in Hastings, to 209 in Merthyr Tydfil, 215 in Hanley, 220 in Aberdare, and 233 in Longton.

Small-pox caused 441 deaths in these 67 towns during the year under notice, of which 427 occurred in Gloucester, 4 in Aston Manor, 3 in Wigan, 3 in Newport, 2 in Exeter, 1 in Southampton, and 1 in Merthyr Tydfil.

The death-rate from *measles* in these towns averaged 0.64 per 1000, the highest rates having been 1.78 in Dover, 1.80 in Northampton, 1.98 in Wigan, 2.19 in Longton, and 2.26 in Hanley.

The death-rate from scarlet fever averaged 0.20 per 1000, the highest rates in the several towns having been 0.46 in Dudley, 0.47 in Ashton-under-Lyne, 0.51 in West Bromwich, 0.59 in Barnsley, and 0.75 in St. Helens.

Diphtheria caused a death-rate averaging 0.25 per 1000, the highest rates having been 0.70 in Chester, 0.80 in Aberdeen, 0.92 in Gloucester, 1.15 in Worcester, and 1.73 in Macclesfield.

The death-rate from whooping-cough averaged 0.43 per 1000, the highest rates having been 0.81 in West Bromwich, 0.86 in Chester, 0.92 in Darwen, 1.00 in St. Helens, and 1.23 in Barnsley.

The death-rate from "fever" averaged 0.20 during the year. The highest "fever" rates were 0.40 in Ashton-under-Lyne and in Keighley, 0.43 in Middlesbrough, 0.50 in St. Helens, and 0.52 in Bootle.

The death-rate ascribed to diarrhæa averaged 0.68 per 1000. The highest rates were 1.25 in Bootle, 1.29 in Dudley, 1.37 in Worcester, 1.63 in York, and 1.68 in Aston Manor.

The death-rates from the "seven zymotic diseases" in the aggregate averaged 2.52 in the 67 towns, and ranged from 0.51 in Bournemouth, 0.78 in Carlisle, 0.84 in Tynemouth, 0.85 in Colchester, and 0.92 in Bath, to 3.98 in St. Helens, 3.99 in Burton on-Trent, 4.11 in Wigan, 4.35 in Longton, and 13.12 in Gloucester.

Edinburgh, Glasgow, and Dublin.

In Edinburgh the death-rate in 1896 was equal to 16.9 per 1000, against 18.6 in London. In Glasgow the rate was 20.4 per 1000, and in Dublin it was 24.9. In Glasgow the death-rate from measles was equal to 1.2 per 1000, and from whooping-cough to 0.9 per 1000.

Colonial and Foreign Cities.

From Weekly and other Returns with which the Registrar-General is favoured by the Authorities of thirty-three of the principal Colonial and Foreign cities, with an estimated aggregate population of about twenty-one and a half millions, it is found that the deaths last year in these cities collectively were equal to a rate of 23.6 per 1000 living.

In twenty-eight European and American cities, with an aggregate population of more than nineteen millions, the rate was 21:3 per 1000. In these twenty-eight cities the lowest rates were 16.3 in The Hague, 16.8 in Copenhagen and in Stockholm, 16.9 in Cincinnati, 17.3 in St. Louis, 17.4 in Amsterdam, and 17.5 in Hamburg; in the other cities the rates ranged upwards to 25.0 in Venice, 25.1 in Breslau, 25.4 in Buda-Pesth, 27.9 in Trieste, 30.9 in St. Petersburg, and 38.9 in Moscow. In Paris the rate was 19.0, in Berlin 17.9, and in Vienna 22.3. against 18.6 in London. Small-pox caused 143 deaths in St. Petersburg, 23 in Paris, 22 in Moscow, and 13 in Buda-Pesth. Measles was proportionally most fatal in St. Petersburg, Moscow, Vienna, Venice, Prague, Trieste, and Turin; scarlet fever in St. Petersburg, Moscow, and Trieste; diphtheria in St. Petersburg, Moscow, Munich, Vienna, Trieste, and in most of the American cities from which returns are received; whooping-cough in Rotterdam, Stockholm, and Christiania; "fever" in St. Petersburg, Moscow, Prague, Rome, and Philadelphia; and diarrheal diseases (including cholera) in Christiania, St. Petersburg, Moscow, Breslau, Munich, and Venice.

Among the three Indian cities the death-rate was equal to 33.0 in Calcutta, 37.8 in Madras, and 41.5 in Bombay. Small-pox caused 702 deaths in Bombay, 39 in Madras, and 35 in Calcutta; measles caused 497 deaths in Madras, and 247 in Bombay. Of the 11,324 deaths referred to "fever" in Bombay, 1805 were attributed to "bubonic" fever. The mortality from diarrhæal diseases (including cholera) was excessive in each of the three Indian cities.

In Cairo and Alexandria the death-rates were respectively 55.2 and 42.4 per 1000, these high rates being mainly attributable to excessive mortality from diarrhæal diseases.

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 $\mathbb{E}_{\mathbb{R}^n} \left\{ \sum_{i=1}^n \mathbb{E}_{\mathbb{R}^n} \left\{ \mathbb{E}_{\mathbb{R}^n} \left\{ \mathbb{E}_{\mathbb{R}^n} \right\} \right\} \right\} = \mathbb{E}_{\mathbb{R}^n} \left\{ \mathbb{E}_{\mathbb{R}^n} \left\{ \mathbb{E}_{\mathbb{R}^n} \right\} \right\}$

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	CITIES	AND BOROUGHS.	Cols.	- 33 Towns.	LONDON, WEST HAM, CROYDON, BRIGHTON, PORTSMOUTH, PLYMOUTH, PLYMOUTH, CARDIFF, SWANNEA,	Wolverhampton. Birmingham. Norwich. Leicester. Nottingham.	BIRKENHEAD, LIVERFOOL. BOLTON. MANCHESTER, OLDHAM. BURKEYEY, BLACKBURN, PRESTON.	HUDDERSFIELD. HALIPAX. BRADPORD. LEEDS. SHEFFIELD. HULL. SUNDERLAND. GAIRSHEAD.
	BAIN-	FALL (Inches).	20.	25.71	22.45 28.00 25.37 25.37	20.54	1 10 1 1 1 1 1 1 1	27.44 81.36 27.76 24.78 26.75
	MEAN	TEMPE-	19.	48.0	48.5 49.9 48.2	48.6	1.00	44.5.5.9 44.8.5.2.2.8 6.5.7.1 1.1.1
	d. dis	Uncertified Of Deanses of De	18.	3147	20 20 20 20 20 20 20 36 18	520 530 57 7	21 495 7 157 103 8 8 26 64 104	24 4 4 2 2 2 4 4 4 2 2 4 4 4 2 4 4 4 4
	.80	Deaths in sildud	17.	41808	23178 465 263 263 387 464 173 808 808 364 136	219 1783 218 422 594 594 233	252 3309 265 2478 755 274 132 216 208	153 197 489 895 792 531 144 633
		easO teaupal	16.	15514 4	7568 242 128 121 212 121 121 332 231 115	77 262 152 229 283 151	146 1002 199 950 950 835 171 88 120 68	56 92 235 618 618 337 123 321 321
		Violence.	15.	7849	3439 143 125 117 61 159 139	33 334 52 116 162 53	734 684 689 139 688 822 822 843	42 45 121 270 219 177 86 45 174
nelude		.nadriaid	14.	8760	3223 215 215 73 132 76 121 127	124 613 82 273 162 67	748 134 504 504 264 264 31 129	27 88 88 284 202 121 72 110
The DEATHS registered in the 53 Weeks include		Fever.	13.	2073	609 61 118 27 6 118 113	36 107 21 40 79 79	206 206 48 122 71 71 23 24 24 26	13 28 87 101 62 53 83 83 83 83 83
the 58 T	a a	-SariqoodW cough.	12.	6245	2937 158 62 32 59 17 105 56	31 378 90 90 54	294 294 102 360 189 53 28 47 47	246 246 246 205 113 76 35 103
red in t	Deaths from	Diphtheris.	11.	4202	2683 187 29 19 20 13 37 62 62 10	270 270 24 64 13 10	22 157 14 81 81 85 85 86 87 10 10	21 21 49 56 80 80 80 80
registe	Dea	Scarlet Fever.	10.	2406	946 200 200 200 200 200 200 200 200 200 20	21 148 4 50 26 11	32 227 40 197 104 56 8	19 71 71 24 57 26 26 26
EATHS		Measies.	တိ	7839	3697 117 67 125 125 143 38 6	9 307 1117 121 205 34	115 306 6 570 202 167 63 41	28 16 199 200 260 260 143 137 139
The I		.xoq-liam2	ϡ	25	04111170001	11111	1111111	1, 11111
		Principal Zymotic Liseases.	7.	31550	797 233 199 383 210 444 376	274 1823 257 599 575 197	330 1938 344 1834 1834 879 425 229 229 238	163 105 369 389 937 1024 745 428 310 450
	s of	Persons aged 60 Years and upwards.	6.	44757	18370 723 476 653 838 824 1142 464 464	405 1973 564 703 1005 422	413 2760 542 2275 810 810 541 553 553	466 514 972 1269 1269 896 524 742
	Deaths of	Infants under 1 Year of Age.	5.	56768	21853 1432 4532 408 772 470 923 923 494	3278 559 1162 1138 438	624 3870 645 8133 1489 729 552 625 768	348 348 348 849 20120 1244 769 1107
		DEATHS.	4.	208534	83511 4268 1706 1975 3009 1786 3961 2784 1689	1755 10600 1919 3376 4087 1619	2133 14617 2536 12184 4848 2955 1830 2351 2403	1682 1669 3840 7670 6797 4245 2828 1910 3981
П		BIRTHS.	ကိ	339115	135796 8658 8058 3002 3022 5006 5465 6465 6465 6591 3061	3023 16603 3400 6212 6758 2901	3527 22416 3831 17787 7480 3971 3245 3649 3649	2096 2337 5939 12574 12011 7171 4873 3583 6701
	Persons	to an Acre.	લ	35.1	27.50.00 27.	24.5 39.5 14.4 23.1 29.5	31.3 47.8 51.1 41.0 40.7 80.3 26.2 18.6 27.8	8.55 21.2 11.1.1 18.7 26.8 42.6 31.4 39.5
	POPULATION, Retimeted	middle of 1896.*	1.	10,846,971	4,421,952 261,297 118,006 120,499 178,639 90,276 230,623 162,690 98,645	86,530 501,241 108,630 198,659 229,775 101,770	109,343 632,512 120,380 523,561 210,707 143,442 102,805 129,459 113,864	100,463 94,775 228,809 410,249 847,278 220,844 140,886 98,456 212,223
	CITIES	AND BOROUGHS.	Cols.	33 Towns	LONDON - WEST HAM CROYDON BRIGHTON - PORTSMOUTH - PLYMOUTH - CARDIFF - CARDIFF - SWANSEA	WOLVERHAMPTON- BIRMINGHAM NORWICH IMCESTER NOTTINGHAM	BIRKENHEAD. LIVERPOOL. BOLTON. MANCHESTER. SALFORD. OLDHAM. BURKLEY. PRESTON.	HUDDERSFIELD HALLFAX BRADFORD LEEDS SHEPFIELD HUL SUNDERLAND GATESHEAD

* By "estimated" population is meant the number of persons who would be living if the mean rate of increase in the last intercensal period had since been maintained.

† Including deaths of Londoners in the Morropolitan Workhouses, Hospital, and Lumatic Asytums situated outside Registration London, but excluding deaths of persons not belonging to London cecurrang in the Higheste Small-pox Hospital, in the Middlesex County Lumatic Asylum at Wandsworth, and in the Metropolitan Asylums Board Hospitals within Registration London. The deaths in the provincial towns have been similarly corrected.

* See note (†) to Table 1,

TABLE 2 .-- 33 Towns. -Birth-, and Death-rates, and Analysis of Mortality, in the 53 Weeks of 1896. In this Table, 0.00 indicates that the deaths were too few to give a rate of 0.005; when no death occurred, - is inserted.

_				_					
	CITIES	AND	BOROUGHS.	Cols.	- 33 TOWNS.	London.* West Han. Croydon. Brighton. Porremon. Pornout. Plymouth. Cardine. Cardine. Swansea.	Wolverhampton, Birmingham. Norwich. Leicester. Nottingham. Derby.	BIRKENHEAD. LIYERCPOOL. BOLTON. MANCHESTER. SALPOOR. OLDHAM. BURNLEY. BLACKBURY. PRESION.	HUDDERSFIELD. HALITAX. BRADFORD. LIBEDS. SHEFFIELD. HULL. SUNDERLAND. GATEBHRAD.
E hs.	l p	ourr es ot tth.	Uncer sur Des	20.	1.5	0001111001111	21.21.0	048818478	81-0083000 87-80508665
PERCENTAGE Total Death			tseCl fuq titanI	19.	20.0	27.8 15.6 4.0 15.6 15.8 15.8 17.8 17.8 17.8	111.22 111.22 12.44 14.55 14.5	22.22.22.02.02.02.02.02.02.02.02.02.02.0	11.3 11.7 11.7 11.7 12.5 14.7 15.9
PERCENTAGE to Total Deaths			soupaI Rea(I	18.	2.4	0.00.00.00.00.00.00.00.00.00.00.00.00.0	4000000	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	870110870799 87011087041
	2 50	P	d rds.						
ANNUAL Drath Rate	per 1000 living.	Age	Years and upwards	17.	67.7	633. 603. 612.1.66. 642.1.66. 642.1.66. 643.66.	69.3 69.3 66.0 64.8 71.8	68.1 80.8 87.8 121.2 771.4 772.6 81.5 81.5	47.47.7.39.78.7.49.66.1.06.0.00.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.1.06.0.00.0.1.06.0.00.0.1.06.0.00.0.1.06.0.00.00.00.00.00.00.00.00.00.00.00.0
AN	per 10	Aged	to 60 Years.	16.	9.01	0.00 F 90 90 90 90 90 90 90 90 90 90 90 90 90	10.0 111.4 8.2 8.2 9.1	10.7 118.5 118.6 118.9 118.9 118.9 118.9 118.9	9.90 10.00 10.00 10.00 10.00 10.00 10.00
DEATHS	under	Year	Births.	15.	167	161 165 135 135 178 142 165	184 197 164 187 151	177 178 168 176 199 170 170 203	166 149 143 173 173 173 165
		*90	Violen	14.	17.0	0.77 0.54 0.64 0.66 0.68 0.88	0.38 0.66 0.47 0.57 0.69 0.69	0.52 0.78 0.47 0.65 0.65 0.65 0.62	0.41 0.52 0.65 0.65 0.79 0.60 0.45 0.81
		• 48:00	Diarrh	13.	62.0	0.73 0.73 0.73 0.73 0.74 0.75	1.41 1.20 0.74 0.69 0.65	0.68 0.94 0.94 0.74 0.74 1.11	0.26 0.38 0.69 0.90 0.72 0.51
		-	Fever.	12.	0.19	0.15 0.15 0.07 0.08 0.08 0.15	0.20 0.34 0.20 0.34	55 55 55 55 55 55 55 55 55 55 55 55 55	0.13 0.21 0.21 0.23 0.28 0.28 0.28
	ш	-Su	Мроор Мроор	11.	0.57	0.65 0.28 0.19 0.26 0.63 0.63	0.35 0.25 0.39 0.52	0.088 0.088 0.088 0.088 0.088 0.088 0.088	0.54 0.45 0.05 0.05 0.05 0.05 0.85 0.85
	Deaths from	.sir	Diphth	10.	88.0	0.60 0.70 0.16 0.11 0.10 0.10	0.0000000000000000000000000000000000000	0.20 0.21 0.12 0.23 0.24 0.08 0.08	0.21 0.22 0.02 0.12 0.16 0.23 0.06 0.18
CIVING.	Dea	*.I.	Searlet Feve	6	0.55	0.01 0.02 0.03 0.03 0.03 0.04 0.04	0.24 0.29 0.04 0.11 0.11	0.29 0.35 0.04 0.04 0.07 0.07	0.19 0.10 0.29 0.25 0.25 0.19 0.126
RSONS 1		*8	Measle	oc	12.0	0.82 0.63 0.63 0.63 0.63 0.63	0.10	1.04 0.48 0.94 0.94 0.03 0.03	0.27 0.17 0.46 0.45 0.67 1.10 0.67 0.64
1000 PE		*xod	-lism2	7.	00.0	20.0 0.00 0.00 0.00	111111	11111111	110000
ES PER		21.1	lionird o:nyZ o:sea	6.	2.86	3.14 3.00 11.93 1.94 1.90 1.90 1.18	3.11 2.33 2.97 1.91	22.97 23.97 33.42 4.10 22.91 1.82 1.82	1.60 1.10 1.10 1.158 2.28 2.91 8.32 3.00 3.10
ANNUAL RATES PER 1000 PERSONS LIVING			2nd Jan. 1897.	10	18.9	18.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1.6 1	20.0 20.8 17.4 16.7 17.5	200.7 200.7 200.7 200.6	16.5 117.5 118.5 119.8 119.8 119.1
ÄNN	eaths.	Weeks ending	28th Dec. 1895.	<u>4</u> .	20.1	19.9 17.9 17.9 17.8 18.2 18.2 18.3 18.3	24.4 20.3 19.3 17.2 19.0	0.00 4.00 4.00 0.00 4.00 4.00 0.00 4.00 4	16.9 19.8 20.5 20.5 20.8 21.8 21.8
	Total Deaths	or 53 Wee	29th; Dec. 1894.	စာ	18.1	17.8 13.2 146.4 17.3 17.3 17.3 17.3	20.7 18.6 14.7 17.2 15.0	18.1 18.8 20.4 20.4 21.0 118.6 18.7 20.8	15.8 16.5 17.9 17.8 17.4 20.8 17.7
		52	30th Dec. 1893.	oi	9.12	21.3 18.9 16.3 18.2 21.2 18.2 19.7 19.7	23.3 22.0 20.0 20.0 18.5 18.5	20.52 27.53 24.13 28.13 26.13 26.13 26.13	17.2 221.0 221.3 221.3 221.8 221.8 19.3 211.0
	BIRTHS	in 53 Weeks	anding 2nd Jan. 1897.	1.	30 7	80.5 80.5 80.5 80.5 80.5 80.5 80.5 80.5	4.9.8.8.6.6.8.6.8.9.8.9.8.9.9.8.9.9.9.9.9	31.7 34.9 34.9 383.0 27.2 27.2 27.7 38.6 38.6	20.5 20.5 20.7 20.0 30.7 30.0 30.0 30.0 30.0 30.0 30.0 3
		10		Cols.	3		111111		
			ž.	ပို ၂			PTON 1		g
	CITTES.	AND	вохопеня		WNS	LONDON* WEST HAM CROYDON BRIGHTON PORTSMOUTH PLYMOUTH BRISTOL - CARDIFF -	WOLVERHAMPTON BIRMINGHAM NORWICH LEICESTER NOTTINGHAM	BIRKENHEAD LIVERPOOL BOLTON - MANCHESTER SALFORD - OLDHAM - BURNLEY - BLACKBURN -	HUDDERSPIELD HALIFAX
	C		ROM		33 TOWNS	LONDON* WEST HAM CROYDON BRIGHTON PORTSMOUT PLYMOUTH BRISTOL - CARDIFF -	WOLVERHAL BIRMINGHA NORWICH - LEICESTER NOTTINGHA	BIRKENHEA LIVERPOOL BOLTON - MANCHESTE SALFORD - OLDHAM - BURNEY - BLACKBURN -	HUDDERSFI HALIFAX - BRADFORD LEEDS - SHEFFIELD HULL SUNDERLAN GATESHEAD
						よしてはなる。	PARHAR	HHHO WE HHH	田田田田の田屋では

* See note (†) to Table 1.

Table 3.-33 Towns.-Death-rates per 1,000 living from All Causes, and from the Principal Zymotic Diseases, and Infant Mortality,

the Ten Years 1886-95, and in 1896.

Crared	AND BOROUGHS.	33 TOWNS.	LONDON.* WELT HAM. CROYDON. BRIGHTON. PORTRANOUTH. PLYMOUTH. CARDIFE. SWANSEL.	Wolverhampton, Birmingham, Norwich, Leicester, Northingham, Derby,	BIRKENHEAD. LIVERPOOL. BOLTON. MANCHESTER. SALFORD. OLDHAM. BURNLEY. BLACKTURN. PRESTON.	HUDDERSFIELD, HATIPAX. BARDFORD, LEBOS. SHEFFIELD. HULL. SOUNDERLAND. GATESHEAD.
UNDER IAR TO	1896.	167	161 165 1155 1154 1178 1163	184 197 164 187 151	177 173 168 176 199 184 170 171	166 149 143 169 173 173 172 165 165
DEATHSUNDER ONE YEAR TO 1000 BIRTHS.	Ten years 1886-95.	191	151 151 160 160 160 160 160 160 160 160 160 16	183 174 176 202 171 150	1681 1881 1788 1788 1986 1987 1988 1988 1988 1988 1988 1988 1988	102 102 173 173 173 167 167 165 165
	1896.	62.0	2.8.0 0.0 0.0.0 0.0.0 0.0.0 0.0.0 0.0.0 0.0.0 0.0.0 0.0.0 0.0.0 0.0.0 0.0 0.0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	1.41 1.20 0.74 1.35 0.69	0.68 1.16 1.09 0.94 1.23 0.62 0.70 0.71	0.38 0.38 0.38 0.32 0.32 0.32 0.32 0.32
DIARRHGA.	Ten years 1886-95.	880.0	0.000000000000000000000000000000000000	1.15 0.08 1.55 1.03	0 1 1 1 2 3 1 1 1 1 2 4 1 1 1 1 2 4 1 1 1 1 2 4 1 1 1 1	0.00
ER.	1896.	0.19	0.03 0.03 0.03 0.03 0.03 0.03 0.03 0.03	0.41 0.21 0.19 0.20 0.34 0.20	888889788 88889788 88889	0.13 0.21 0.21 0.29 0.29 0.37 0.37
FEVER	Ten years 1886-95.	0,21	00.53 00.53 00.53 00.53 00.53 00.53	0.000.000000000000000000000000000000000	33.7 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	000000000000000000000000000000000000000
PING.	1896.	0.57	0.000 000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.	0.35 0.25 0.25 0.39 0.52	0.53 0.46 0.83 0.67 0.36 0.37 0.37	44500000000000000000000000000000000000
WHOOPING.	Ten years 1886-95.	0.55	000000000000000000000000000000000000000	00000 555 640 14	000000000000000000000000000000000000000	000000000 8244684888 8344684888 8348848888
IBRIA.	1896.	0.38	0.00 0.70 0.16 0.11 0.11 0.37 0.37	0.00	0.25 0.12 0.13 0.23 0.24 0.08 0.08	0.21 0.12 0.13 0.16 0.16 0.06 0.18 0.18
ріритнивіа	Ten years 1886–95.	0.27	00.32	0.00	0.12	000000000000000000000000000000000000000
LET EB.	1896.	0.52	0.21 0.021 0.03 0.03 0.03 0.03 0.03	0.24 0.29 0.25 0.25 0.11	0.03 0.03 0.04 0.03 0.00 0.00 0.00 0.00	0.19 - 0.10 0.17 0.25 0.25 0.12 0.12
SCARLET FEVER.	Ten year? 1886–95.	0.27	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.23 0.20 0.14 0.17 0.18	23.000.000.000.000.000.000.000.000.000.0	0.0000000000000000000000000000000000000
LES.	1896.	0.71	0.65 0.65 0.65 0.65 0.63 0.63 0.06 0.06 0.06	0.10 0.60 1.06 0.60 0.88 0.88	1.04 0.05 1.06 0.94 1.15 0.60 0.31	0.27 0.17 0.46 0.49 0.57 0.57 1.16 1.37 0.64
MEASLES	Ten years 1886-95.	09.0	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.55	0.0000000000000000000000000000000000000	000000000 4446844884 4800086784
ALL-POX.	1896.	00.0	70.0 0.0 0.0 0.0	1 1 1 1	11111111	11000
SMALI	Ten years 1886–95.	0.03	0.0000000000000000000000000000000000000	0.00	000000000000000000000000000000000000000	000000000000000000000000000000000000000
USES.	1896.	18.9	18.6 16.1 16.1 16.8 16.8 16.8	20.0 20.8 17.4 16.7 15.7	19.2 22.7.7 20.7.7 22.6 22.6 20.3 17.5 17.5 17.5	16.5 17.3 16.5 18.8 19.9 19.8 19.1
ALL CAUSES.	Ten years 1886-95.	20.0	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	22. 20.07 19.06 19.09 19.07	00 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	200.2 200.3 210.3 210.6 210.9 210.9
CITIES	AND BOROUGHS.	33 TOWNS	LONDON* WEST HAM CROTDON BRIGHTON PORTSMOUTH PLYMOUTH CARDIFF SWANSEA	WOLVERHAMPTON BIRMINGHAM NORWICH LEICESTER NOTTINGHAM DERBY	BIRKENHEAD JAVERDOL BOLTON MANCHESTER SALPORD OLDHAM BURKEY BLACKBURY PERSTON	HUDDERSTELD HALLEAX BALDFORD IREDS SHERED HULL SUNDERLAND GATESHEAD NEWCASTLE

Table 4.-33 Towns.-Mean Temperature at Greenwich, and

,			TAB	LE Z	.—33	. 10	wns		Lean.	1.61	nhe	atu.	re at	QP I C	enw	icu,	STELL
174		PERA AT GI	TEM- TURE REEN-											An	NUAL	RAT	E OF
Number of Week.	WEEK	Fahrenheit.	Centigrade.	THIRTY-THREE TOWNS.	NO.	r HAM.	CROYDON.	BRIGHTON.	Portsmouth.	PLYMOUTH.	TOI.	IFF.	SWANSEA.	WOLVERHAMP- TON.	BIRMINGHAM.	NORWICH.	LEICESTER.
Num		Fahr	Cent	THIE	LONDON	West	CROY	BRIG	Port	PLY	BRISTOL.	CARDIFF	SWA	WOLV TON.	BIRN	NOR	LEIC
	YEAR .	50.1	10°06	18*9	18.6	16.1	14.5	16.1	16.6	19.6	16.9	16.8	16.8	20.0	20.8	17.4	16.7
	1st Quarter	42.2	5.67	19.5	19*5	15.2	14.4	16.6	16°3	18.3	18.4	15.4	16.8	19.6	21.4	21.9	19.5
	2nd ,	55°6	13.11	18.2	17.9	14.4	14.4	14.1	15.6	17.9	16.7	15.4	15.1	17:3	19.9	15.0	14.5
	3rd "	60°4	15.78	19.1	18.8	19.0	13.2	16-4	18.8	19.0	15.6	17.6	14.7	21.0	21.9	14.9	18.1
	4th	42.4	€'78	18.8	18.1	15.2	14.6	17.3	15.6	22.9	16.9	18.8	20.6	21.7	20.1	17.7	14.9
1 2 3 4	Jan. 4 ,, 11 ,, 18 ,, 25	45.8 37.2 43.0 39.5	7.67 2.89 6.11 4.17	20.7 18.5 19.7 18.8	20°1 18°2 19°1 18°7	15.8 18.6 15.8 14.0	9.7 16.3 11.0 17.7	14.7 16.9 20.3 13.0	17.5 15.5 16.6 15.8	20.8 15.0 14.4 17.9	24.4 15.4 17.2 14.9	17.9 12.5 14.4 12.2	22.7 14.8 24.3 16.9	22.9 19.9 30.1 16.3	24.0 22.1 23.7 19.8	13.9 24.0 16.8 21.1	19.9 21.5 18.9
5 6 7 8 9	Feb. 1 ,, 8 ,, 15 ,, 22 ,, 29	40 0 39 2 43 9 40 8 37 6	4°44 4°00 6°61 4°89 3°11	18.4 20.5 19.4 19.5 20.0	17.9 20.8 20.4 20.1	16.2 16.6 16.8 14.8 16.4	14.1 15.0 12.8 13.7 15.0	16.0 20.3 14.7 22.9 14.3	18.1 19.3 15.5 14.3	17.3 19.1 20.8 16.8	15.1 18.8 17.6 18.8	16.3 17.9 16.3 17.0 12.2	15.3 15.3 16.9 18.0	15·1 24·7 15·1 20·5 14·5	22.7 20.3 18.6 21.4 20.7	19.7 25.4 26.4 27.4 25.0	21.5 22.6 16.0 18.4 20.2
10 11 12 13	March 7 14 21 28	43·9 46·4 45·4 49·1	6.61 8.00 7.44 9.50	20.8 20.0 19.2 18.8	20°4 21°8 20°7 18°9 18°0	15·2 16·2 13·2 12·2	14·1 12·4 18·6 16·3	20·3 14·7 16·0 11·7	20°4 16°1 15°5 13°1 14°0	19°1 25°4 17°3 16°2 18°5	18°1 21°3 15°6 22°2 19°7	14.4 20.5 15.1 13.8	15·3 19·0 10·0 15·3 13·7	20·5 18·1 20·5 16·9	20°2 20°4 22°2 22°3	21.6 22.1 26.9 14.4	20.5 20.5 14.4 17.6
14 15 16 17	April 4	42°2 51°2 45°8 49°0	5.67 10.67 7.67 9.44	18.3 20.0 19.0 19.5	17.9 20.4 19.5 19.3	12°2 14°2 17°2 16°8	16°3 13°3 12°8 15°0	16.9 13.0 12.1 13.8	11.7 16.1 14.6 16.1	21.4 15.0 19.6 15.6	18.5 19.0 15.6 17.4	13·1 15·7 16·3 13·5	18.0 20.1 11.1 11.6	17.5 20.5 19.9 21.7	18°1 21°8 25°2 19°2	15.4 21.1 18.2 15.8	16.0 16.0 15.2 13.6
18 19 20 21 22	May 2 9 16 16 23 30	50.6 52.3 58.5 55.5 55.4	10.33 11.28 14.72 13.06 13.00	18.4 18.5 18.4 18.1 17.6	18.5 18.0 17.9 17.8 16.9	12.4 14.2 13.4 14.4 13.6	16.8 13.3 15.9 15.5 18.6	11.3 16.0 11.7 12.5 13.8	18·1 12·3 19·0 17·2 18·7	19°1 26°0 19°1 15°0	16.5 18.1 17.6 12.4 14.2	14.1 15.1 19.6 13.8 15.1	26.4 12.7 18.0 17.4 8.5	16·3 18·7 15·1 15·7 16·3	17.8 22.8 19.0 22.9 18.2	15.8 13.9 14.4 14.4 13.0	12.1 14.4 14.4 12.6 12.3
23 24 25 26	June 6 3 20 3 27		17:39 16:89 18:89 16:33	17.8 16.7 17.3 16.9	17.3 16.5 16.2 16.2	14.4 15.4 15.8 13.4	11.2 14.1 11.0 13.3	16°9 14°7 14°3 16°0	13.1 13.4 21.0 12.0	12°1 12°1 19°6 14°4	18·3 17·4 14·2 17·4	20.2 15.1 15.7 12.8	13.7 12.7 13.2 12.7	19.3 13.9 13.9 16.9	16.7 15.1 21.6 20.2	16°3 9°1 18°7 8°6	16.5 12.6 16.8 16.3
27 28 29 80	July 4 11 18 25	61°3 68°3 64°9 67°5	16°28 20°17 18°28 19°72	17.7 19:9 21.4 24.8	18·3 20·9 22·3 25·3	14.6 16.4 21.4 31.7	9.7 14.6 14.1 19.0	12°1 13°4 13°4 13°0	16°3 19°6 17°5 29°2	17:3 22:5 23:1 23:1	16.7 14.9 16.7 17.0	17.0 18.9 18.9 20.2	12·2 10·6 14·3 11·6	16.9 23.5 18.7 30.7	15.7 21.2 23.2 34.4	14·4 18·2 13·4 18·7	17.8 17.8 23.6 26.8
31 32 33 34 35	August 1 ,, 15 ,, 22 ,, 29	58.4 59.0 58.1	16.89 14.67 16.00 15.00 14.50	24.5 21.4 19.9 18.0 17.4	24·3 21·1 19·7 16·8 16·1	27°1 24°5 21°6 17°6 16°0	19.0 17.2 15.5 12.4 12.4	18.2 23.4 21.6 21.2 19.0	28.3 20.4 26.9 21.3 16.9	26.0 19.6 15.6 19.1 23.7	12.2 19.7 16.1 15.8 14.2	24.7 18.6 18.9 16.0 16.3	18.5 16.4 14.3 19.0 19.0	28·9 24·7 27·1 21·1 19·9	29.8 29.5 24.2 19.7 22.4	18.2 17.3 18.7 11.5 11.0	27.6 18.6 19.7 17.6 13.1
36 37 38 39	Sept. 5 ,, 12 ,, 19 ,, 26	58.7 59.7 58.2 52.9	14.83 15.39 14.56 11.61	16.5 15.8 15.1 15.3	15.4 14.8 14.6 14.9	12°2 16°4 14°6 13°0	9·3 9·3 13·3 9·7	14.7 15.6 16.0 11.7	11.7 14.0 12.8 9.9	15.6 13.9 15.6 11.6	17.9 13.3 15.6 12.7	17.6 12.5 16.0 12.8	11.6 14.3 12.2 16.9	21·1 12·7 15·7 12·7	17.9 18.9 12.6 15.1	12.0 13.0 14.9 12.5	17·1 11·8 10·5
40 41 42 43 44	October 3 10 17 24 31	53·2 52·4 46·9 42·1 41·6	11.78 11.33 8.28 5.61 5.33	15.7 16.7 16.3 17.6 19.7	16.2 15.7 17.1	13.4 12.2	11°5 11°5 9°7 11°5 13°3	15.6 14.3 14.7	12.6 13.7 15.8	14.4 17.9 14.4	11.3 15.8 16.1 19.0 14.5	12.2 15.7 14.1	13.7 12.2 18.5	20.5 18.1 11.4 19.9 23.5	19.2	10.6 15.8 16.8	10.0 12.3 9.4 15.0 17.1
45 46 47 48	Nov. 7 , 14 , 21 , 28	40.0 42.1 42.7 39.3	4°44 5°61 5°94 4°06	20.6 20.8 21.3 19.3	20.2 19.8 19.9 18.8	19·4 15·4 19·4	20.8 21.2 16.3	17°3 14°3	16·1 15·8 18·7 16·1	26.6 34.1 25.4 23.1	15·8 15·8	12.8 19.2 26.3 24.7	15.9 22.2 21.7	24.7 23.5	20°6 20°8 24°2	23.0 16.8 12.5	15.0 16.0 13.1 16.0
49 50 51 52 53	Dec. 5 , 12 , 19 , 26 Jan. 2	39.8 43.8 34.6 37.7 42.1	4.33 6.56 1.44 3.17 5.61	19.4 18.8 18.2 17.0 22.3	18.9 18.1 17.2 15.1 20.8	15.6	17.2 12.4 15.0 11.0 16.8	12.5		19°1 24°8	19·2 19·2	16.7	20.6	22.9	17.9	19°2 17°3 18°2 18°7 31°2	19.9 12.9 15.5 16.8 19.7
		THE REAL PROPERTY.			1									-	1		

^{*} See note (†) to Table 1.

Annual Rate of Mortality in each Town, in each Week of 1896.

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Мон	RTALIT	TY PE	R 100	0 IN																ؿ
Nottingham.	DERBY.	BIRKENHEAD.	LIVERPOOL.	Boltow.	MANCHESTER.	SALFORD.	OLDHAM.	BURNIEY.	BLACKBURN.	PRESTON.	HUDDERSFIELD,	HALIFAX.	BRADFORD.	LEEDS.	SHEPPIELD.	HULL.	SUNDERLAND.	GATESHEAD.	NEWCASTLE.	Number of Week.
17.5	15.7	19.2	22.7	20.7	22.6	22.6	20.3	17.5	17.9	20.8	16.2	17*3	16.2	18.8	19.3	18.9	19.8	19.1	18.2	
16.3	16.8	19.4	23.8	22.4	23.2	23.2	21.2	18.6	18*4	22.2	16.4	19.8	17.0	18.6	19.4	17.0	18.4	17.5	19.1	
16.7	15.4	18.8	21.1	19.8	23.6	23.6	20.7	16.7	16.2	18.1	16.6	17.2	16.1	18.8	18.7	17.3	21.9	17.4	18.0	
16.7	15.1	18.7	22.9	19.8	22.0	23.8	18.8	16.0	16.1	20.0	15.2	14.7	15.2	18.4	20.2	20.9	20.5	21.4	18.4	
20.1	15.4	19.8	23.1	20.9	21.9	20.0	20.4	18.7	20.3	22.6	17.4	17.6	17.4	19.1	18.7	20.3	18.6	20.0	18.3	
15.4 17.9 15.7 17.0	19.0 16.4 19.5 19.5	19.6 18.1 21.5 18.6	25·1 23·5 25·6 24·6	23·4 20·8 26·9 22·5	25.6 19.2 23.5 22.7	35.9 24.5 24.3 25.0	27.6 17.1 23.6 17.1	19°3 20°3 23°8 21°8	25.4 21.7 14.1 16.9	23·4 22·9 20·6 17·4	18.7 15.1 14.0 15.1	16.5 20.9 27.0 17.1	16.6 12.3 18.5 15.3	18.8 17.8 17.2 18.5	18.0 17.4 18.6 18.2	21.5 15.3 16.8 19.8	15°2 13°2 14°5 16°3	20°1 15°9 17°5 14°8	20·1 17·4 17·0 19·4	1 2 3 4
18.6 16.6 16.3 12.9 19.5	14.9 17.4 13.3 16.9 10.2	17.2 16.2 14.8 18.1 22.4	19.0 25.2 23.4 24.6 23.9	22.1 26.9 17.8 23.4 23.0	21.5 21.6 24.2 22.0 23.7	20.8 22.3 16.3 19.8 22.3	22·2 21·4 22·5 19·3 20·0	20°3 18°8 19°8 12°7 13°7	18.9 15.3 18.5 19.3 18.9	20.6 22.9 22.4 23.8 25.2	15.1 15.6 13.0 16.1 15.1	17.1 24.2 16.0 21.5 21.5	14.6 17.3 17.3 16.0 20.5	20.0 20.2 19.0 16.5 18.5	21.0 20.7 17.6 19.4 19.5	17.5 18.9 15.1 13.0 16.8	16.5 24.2 18.7 17.8 18.7	15.4 21.7 18.0 17.5 19.1	19.2 16.5 19.9 19.7	5 6 7 8 9
18.4 14.8 15.4 13.6	15.9 14.9 19.0	18·1 19·6 24·3 24·3	24.6 24.0 22.3 23.7	19.9 23.4 21.2 19.9	23·8 23·1 23·8 26·1	29.0 19.5 22.8 19.8	23·3 21·8 18·9 20·7	21.8 19.8 16.2 13.2	16·9 19·7 16·5 16·5	19·2 20·1 24·7 25·6	18.7 19.7 16.6 20.2	18.7 19.8 16.5 20.4	18.2 17.3 20.5 16.0	17.0 22.8 18.0 17.6	22·4 17·3 20·9 21·3	14·4 17·5 17·2 17·2	17.5 24.2 18.6 22.3	20·1 19·6 12·7 14·8	18.7 20.4 19.2 21.6	10 11 12 13
16·1 19·7 18·2 17·2	21.0 13.3 19.5 19.5	26·7 17·6 21·9	22.0 21.6 22.0 23.3	17:3 24:7 21:2 21:7	22·1 25·1 19·8 27·8	24·3 22·0 21·5 26·2	20.7 24.7 18.2 24.7	18.8 19.3 17.8 22.8	15.7 21.3 16.5 19.7	21.5 20.1 12.8 25.6	13.0 14.5 15.6 13.5	20.4 16.0 17.1 17.6	21.4 19.6 16.9 16.2	20.5 20.6 18.5 17.1	16.7 20.6 17.6 21.8	18.4 15.6 15.3 16.5	18.2 27.5 22.3 23.0	15*4 15*9 20*1 19*1	16.5 19.7 20.1 17.0	14 15 16 17
14.8 13.8 15.9 15.2 19.7	19.0 14.9 13.3 15.9 12.8	18.6 18.6 16.2 17.6 18.1	19.2 20.4 21.2 20.1 20.7	17.3 19.9 16.9 20.4	26.8 23.1 28.5 22.9 20.2	28.7 31.4 22.0 26.0 17.8	20.4 19.3 20.4 25.4 21.8	8.6 25.9 17.2 15.2 15.7	16.9 16.5 17.3 16.5 15.7	16.5 22.0 17.4 17.4 19.2	16.1 19.7 20.2 15.1 14.5	17.6 14.9 16.5 20.4 17.1	13.9 16.4 17.8 16.4 15.3	17.6 19.0 16.7 20.7 18.4	13.9 19.1 18.9 18.9	18.2 19.1 14.6 12.5 20.8	21.9 23.0 23.0 24.5 24.1	18.5 12.7 19.6 15.4 18.0	19.9 17.9 17.2 18.7 19.9	18 19 20 21 22
20.4 14.8 14.5 16.3	12°3 11°3 10°2 16°9	16·7 15·7 18·1 17·6	21·5 18·5 20·4 23·3	23.8 21.7 16.9 19.1	23·2 24·3 22·4 20·1	22.8 19.8 23.0 21.5	21.4 20.4 18.2 13.8	12.7 16.2 15.2 11.7	18·1 16·1 12·1 12·5	10.5 15.6 14.2 22.4	19.2 19.2 20.8 14.5	19.8 14.3 16.5 15.4	15.7 13.4 13.7 13.2	18.4 17.9 19.0 20.3	17.7 15.5 18.2 16.2	18.9 18.4 18.9 17.2	14.5 21.2 21.9 18.9	22.8 12.7 19.6 15.9	15.0 18.9 17.0 16.2	23 24 25 26
15.4 15.4 19.7 20.9	9·2 12·3 19·5 22·0	20.0 22.9 21.5 22.4	21·3 23·2 26·8 31·7	19.1 16.0 19.5 28.2	20.6 20.4 24.7 24.7	23.8 23.0 31.9 26.0	13.8 17.1 19.3 21.4	17.2 12.7 21.3 20.8	14.9 12.5 16.5 15.3	13.7 18.3 13.7 22.4	14.5 14.0 21.8 16.6	12.7 17.6 13.2 16.0	16.9 13.7 14.6 18.2	17·1 21·8 21·4 22·5	18.6 24.5 23.6 24.5	15·1 22·2 14·2 25·7	21·2 22·3 21·2 21·9	27.5 23.3 21.7 25.4	17.9 19.7 15.2 23.8	27 28 29 30
20 · 2 18 · 2 17 · 2 14 · 5 13 · 2	15.9	20.0 17.6 18.6 16.7 18.6	32.2 22.8 20.8 19.6 19.3	24·3 23·8 21·2 16·9 19·5	26.0 22.6 23.5 22.4 20.1	33·2 24·7 21·8 25·5 22·0	20.0 23.3 17.1 22.2 18.9	18.8 13.2 16.7 16.7 17.8	23.0 14.5 18.5 16.5 16.1	26.6 27.5 22.9 22.4 17.4	15.1 15.6 13.0 15.6 15.6	18.2 16.0 15.4 13.2 17.1	17.3 14.6 13.7 15.7 16.6	20°2 20°3 21°8 17°1 17°2	24.8 24.3 21.0 20.1 18.6	31.2 25.5 19.4 20.8 24.8	31.6 21.2 20.8 24.1 18.2	22·2 24·4 20·7 17·5 23·3	22.4 18.9 17.4 17.7 17.4	31 32 33 34 35
16·3 16·8 14·3 15·0	10.8 8.7 8.7	18.6 16.2 14.3 15.7	19·9 23·1 19·3 18·2	21.7 15.6 11.7 20.4	21.0 19.4 20.7 19.3	19:3 17:6 22:0 19:1	20.0 14.9 17.4 18.9	16.2 14.2 11.2 11.7	16.5 18.5 10.1 16.5	18.8 20.1 16.5 19.2	16.6 15.1 14.0 13.5	13·2 12·7 15·4 11·0	17.3 14.6 14.6 13.4	16·1 14·4 15·7 13·7	20°3 14°6 13°5	17.9 17.0 16.5 21.7	17.8 18.2 12.3 15.6	14.3 14.8 20.1 23.3	15.5 20.1 15.5 17.2	36 37 38 39
14.5 16.3 14.5 17.0	15.4 14.3 18.4	12.4 13.8 19.1 20.0	19.2 19.6 20.1 21.8	20.8 17.8 23.8 20.8	17.2 21.5 19.2 19.4	20.5 21.0 16.6 22.8	19.3 16.7 16.0 18.9	14.7 14.7 12.2 20.8	12.5 16.1 18.1 16.1	15.6 17.9 17.9 23.4	13.5 13.5 11.9 14.0	14.9 16.5 18.7 16.0	16.6 14.6 13.4 16.0	17.4 17.1 16.3 15.0	18.6 18.8 21.8 19.1	18.7 21.0 19.8 21.5	20.4 21.5 18.9 17.5	20.7 14.8 15.9 16.4	17.4 17.9 19.9 14.0	40 41 42 43
24.7 24.3 24.1 21.6 18.6	17.4 16.9 17.4	23.4 22.9 21.9 19.6 20.5	23·7 25·2 24·4 29·2 23·3	18·2 24·3 23·8 29·9 17·3	24.6 24.3 26.9 28.6 21.9	17.6 19.6 21.8 20.8 17.6	25.8 22.5 25.1 18.2 14.2	19°3 24°9 26°4 21°3 16°7	17·7 20·5 26·6 21·7 27·4	22.9 24.3 24.3 33.4 25.6	15·1 18·7 25·4 16·6 19·2	16.5 17.1 20.4 14.3	18.5 17.5 19.6 19.4 19.6	19.7 19.4 21.9 22.8 18.7	18.6 20.1 18.2 16.8	19.4 24.3 21.0 20.8 21.2	17.1 22.7 2).4 18.2 17.5	13.0 22.2 24.9 21.2 19.1	20.4 18.2 18.9 17.4	44 45 46 47 48
19·3 21·1 19·1 17·7 28·6	16.9 11.3 12.3	24·3 21·5 14·3 13·4 29·6	24.6 22.5 23.5 20.2 25.7	16.9 19.9 16.5 21.2 20.8	18.6 22.1 18.5 19.5 24.9	21.0 21.8 19.5 21.0 19.1	22.2 22.5 23.3 17.4 22.9	18.3 19.3 16.7 17.8	19.7 20.1 19.7 21.7 25.4	22.9 21.5 20.1 21.5 25.2	18.7 20.2 16.6 18.2 21.8	19:3 19:3 16:5 24:2	18.7 16.6 19.6 16.9 16.6	20·2 17·5 17·8 18·7 25·3	18:2 15:9 18:2 17:4 20:4	17:9 17:7 17:0 21:7 22:7	16.0 15.6 16.3 14.5 21.1	22.8 24.9 21.2 18.0 22.8	13.7 16.0 19.7 18.4 19.4	49 50 51 52 53

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		Towns (Urban Districts).	Cols.	67 Towns.	Dover. Hastings. Eastbourne. Soutremouth. Southampton.	Willesden. Hornsey. Totten vam. Oxford. Northampton. Cambridge.	Leyton, Walthamstow, Colchester, Ipswich, Great Yarmouth,	Exeter. Devonport. Bath.	St. George (near Bristol) Gloucester. Cheltenham. Longton. Harley. Burton-upon-Trent. Walsall. Uset Bronwich. Dudley. Smethyrick. Smethyrick. Aston Manor.
	səsı	Uncertified Car of Death.	19.	1368	69 17 11 11 11	23.47±3.82	37 33 19	119	4222287112874×44
	oile	Deaths in Pub.	17.	6337	25 24 27 27 21 23 23	88 133 123 164 117	48 56 63 115	88 92 186	130 130 130 130 66 68 68 68 1124 124 105 104
		Inquest Cases.	16.	3761	88 152 153 60	28 117 20 20 20 20 20 20 20	28888	32.55	248278889789484 7287698817899484
		Violence.	15.	2160	25 11 12 13 15 15 15 15 15 15 15 15 15 15 15 15 15	2014288	16 22 15 31 31	15 36 36	2282282828282828282828282828282828282828
lude		Diarrhœa.	14.	2538	11 13 13 13 13 13 13 13 13 13 13 13 13 1	L71364471	69 15 62 84 84	15.88	36 116 16 16 17 18 18 18 18 18 19 19 19 19 19 19 19 19 19 19 19 19 19
The DEATHS registered in the Year include		Fever.	13.	743	rosossir	01094427	00 4 0 7I	150 rs	84885 5 1 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1
the Y	rom	-Saridood'//	12.	1617	20 20 20	48 16 17 17 17	39 22 22 18	100-1	88 0 1 7 7 1 88 60 88 7 0 88 7 .
ered in	DEATHS from	Diphtheria.	11.	927	0470000	828521	29 20 7-14 80	24 17	51.28.88.83.17.13.41.00 20.28.29.20.20.20.20.20.20.20.20.20.20.20.20.20.
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EATHS		Measles.	9.	2392	63 117 117 39 39	128 6 59 449 120	19 19 25 25	32.7	25 24 25 25 25 25 25 25 25 25 25 25 25 25 25
The D		Small-pox.	တိ	441	111181	111111	1111	67 1	172
		Principal Symotic Diseases.	7.	9,386	94 68 47 191 99	303 66 216 91 193 46	190 159 33 158 98	84 84 84	133 540 81 161 161 186 200 196 177 154 124
	Deaths of	Persons aged 60 Years and upwards.	6.	14,814	178 282 124 147 426 276	213 177 252 255 245 245 216	208 160 148 323 298	237 307 385	106 215 3218 3248 1128 1273 2273 2273 2273 2273 2273 2273 2273
	Deat	Infants under 1 Year of Age.	ŏ.	18,133	121 122 102 102 86 424 229	469 135 381 180 270	330 277 133 291 215	157 218 152	251 203 1142 149 449 450 207 207 207 207 207 207 207 207 207 20
	*SI	DEATI	4.	64,454	593 804 436 565 1626 913	1255 549 1236 783 1052 592	931 818 489 1051 854	685 1040 903	667 11112 842 842 855 1349 1214 1259 1414 1259 845 728 1210 962
	'SI	нтяіЯ	တိ	112,477	951 1065 933 771 2843 1826	2750 1283 2559 1188 1792 930	2323 2037 1005 1794 1450	975 1574 1065	1564 1241 1025 11025 1362 2088 2728 2728 2728 1740 1325 1509 2417 1654
	Persons	to an Acre, 1896.	29	13.1	28.0 32.0 8.2 43.6 11.4	21.2 20.3 26.1 10.3 50.7	29.9 15.8 3.4 7.6	19.9 33.0 15.3	233.6 283.6 293.6
elbbi	*9	raluao d of betamitse est to	I.	3,722,413	35,213 58,363 44,586 54,798 87,370 66,739	93,092 57,080 78,574 48,527 66,432 37,863	76,703 69,003 38,329 61,433 50,738	37,404 58,158 51,844	43,633 41,076 46,654 46,654 86,898 86,898 79,294 46,318 44,318 77,410
		Towas* (Urban Districts).	Cols.	67 Towns	Dover Hastings Eastbourne Bournemouth Southampton Reading	Willesden	Leyton Wathamstow Colchester Ipswich Great Yarmouth	Exeter	St. George (near Bristol) Gloucesfer Chettenham Chonkton Hanley Burton-upon-Trent Walsall West Bromwich Wortesster Smethwick Aston Manor

TABLE S. (continued).-Sixty-seven other large Towns.-Population; Persons to an Acre; Births and Deaths in 1896.

		Towns (Urban Districts).	Cols.	Lincoln. Grimsby.	Stockport, Bootle. Southport. Southport. Southport. Warrington. Bury. Bury. Bury. Reighley. Reighley. Reighley. Rotherham. Barnsw-in-Furness. Keighley. Rotherham. Barnsw-in-Furness. Keighley. Rotherham. Botherham. Rotherham. Rotherham. Scarborough. Middlesbrough. Middlesbrough. Middlesbrough. Scarborough. Newport. Straufleool. Stockton-on-Tees. West Hartlepool. Stockton-on-Tees. West Hartlepool. Stockton-on-Tees. West Hartlepool. Stockton-on-Tees. West Flartlepool. Straufleder. Newport. Ystraufleder. Newport. Ystraufleder. Newport.
	səsti	Uncertified Caron of Death.	18.	15	1114 5 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
	oild	ng ni satha Rentitutions.	17.	58	888.8888
		Inquest Cases.	16.	25 62	128 8 6 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
		Violence.	15.	18 36	**************************************
lude		Diarrhoa.	14.	14 16	\$2111 1 x 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
The DEATHS registered in the Year include		Fever.	13.	111	84442488725786884 711000887 77788820 00228
the Ye	d	Whooping.	12.	14	8128728 44884488 814888 81488 45 88115
red in	DEATHS from	Diphtheria.	11.	91	8388577 ccca5649000 grif4903 48007707 748888
registe	DEAT	Scarlet Fever.	10.	-12	8200118700380004 108200038 1200119 084001
EATHS		Measles.	9.	10	81888202 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
The Di		.xoq-llam8	တိ	1 1	1111110011111111 1111111 1111111 111111 11111
		Principal Zymotic Piseases.	7.	56 124	193 252 253 253 253 253 168 168 168 174 174 174 174 174 175 175 175 175 175 175 175 175 175 175
	hs of	Persons aged 60 Years and upwards.	6.	209	2868 2826 2826 2826 2826 2826 2826 2826
	Deaths of	Infants under 1 Year of Age.	5.	196 272	451 147 147 147 147 147 147 147 147 147 14
	′*°S	DEATH	4.	713 931	1590 684 785 11121 700 700 1009 1179 900 900 9109 1179 672 672 673 673 670 810 757 1068 861 758 1012 758 1012 758 1012 758 1012 758 1012 758 1012 758 1012 758 1012 758 758 758 758 758 758 758 758
	*8	нтяіЯ	ణి	1221	2885 1170 1170 1170 1170 1170 1170 1180 1180
	Persons	to an Acre, 1896.	63	11.7	48.50 48.50 49
əlbbi		rangod it of betemitse est to	1.	43,869	76.636 37.246 37.246 37.246 47.246 47.246 58.367 42.385 72.386 72.386 72.386 72.386 72.386 72.386 72.386 72.386 72.386 88.3818 88.413 77.086 77.10 88.434 88.434 88.434 88.434 47.386 66.816 67.816 67.816 67.816 67.816 67.816 67.816 67.816 67.816
		Towns* (Urban Districts).	Cols.	Lincoln Grimsby	Stockport Chester Bootle Southort Suithering Buy Warrington Buy Warrington Buy Warrington Buy Rochdale Rochdale Rocherlam Sarrow-in-Furness Kaikley Rotherlam York Burnsley Burnsley Rotherlam York Burnsley Burnsley Carlington Scarborough Middlesbreugh Darlington Stocktron-on-Tees Vork Burnington Stardyrodw Naturouth Carlisle Tynemouth Tstradyrodwg Merthyr Tydill

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		Towns (Urban Districts).	Cols.	H 49	Dover. Hastings.	Eastbourne. Bournemouth. Southampton.	Willesden, Hornsey. Tottenham,	Oxford. Northampton. Cambridge.	Leyton. Walthamstow. Colchester.	Great Yarmouth. Exeter. Devonport.	St. George (near Bristol), Glouester. Cheltenham. Longton.	Hanley. Burton-upon-Trent. Walsall. West Bromwich.	Worcestor. Smethwick, Aston Man r. Coventry.
GE.	aths.	Incertified Oauses of Death	71 71	1.6	10.6	1.5	0.57	0.00	0.4	1 1,10		11.0007	
PERCENTAGE	to Total Deaths.	Deaths in Public Institutions.	1 5	0.63	12.1	10.9	10.8	15.7	12.0	12.8 8.8 8.9	0.1721	12.0 12.0 13.0 14.0 15.0	14.7 3.9 10.8
. P	to	səssə tsənpul	15.	*G	44n	. 10 00 00 - 10 10 00	0 00 00 0 00 00 0 00 00 00	0 4 8 0 5 8	44.10.5	# 100 c	1000000 100000	0.4.20.00	17.69
AWWITAT	DEATH-RAIE per 1000 living.	Aged 60 Years and upwards.	14.	64.7	60.5	88.5 60.2 4.4.4	63.6 63.6	59.6 70.1	46.8 53.4.6 62.5.4	64.1	68.7 70.0 778.5	69.4 69.8 74.2	61.0 64.5 64.1 64.0
011	DEATH per 100	Aged 1 to 60 Years.	13.	9.3	9.3	9.9	@ 4 00 0 @ 10 10 0	28.80	30000	× 55 × 50	7.7 18.7 8.6 12.0	9.3	20.1 8.2 8.3 8.3
81 s	DEATHS	Year to 1000 Births.	12.	191	127	112	171 105 149	151	142 138 162 148 148	161 139 143	164 139 233 215	135 168 179	164 172 149
		Уіоделее.	11.	0.28	0.65 0.26 0.29	0.35 0.75 0.51	0.31 0.19 0.51 0.43	0.57	0.35 0.35 0.50 0.61	0.40 0.43 0.69	0.27 0.43 0.57 0.58	0.36 0.72 0.75 1.01	0.527
		Diarrhæa.	10.	89.0	0.42 0.26 0.29	0.13 0.73 0.43	0.30 0.71 0.71 0.29	0.66	0.00	0.80 0.43 0.19	0.82 0.27 0.34 1.14 0.53		
rG.		Гечет,	9.	0.50	0.02	0.02			0.12 0.27 0.10 0.15 0.33	0.35		0.10	
LIVIL	00	Whooping-	oč	0.43	0.03 0.15 0.04	0.30	0.51 0.28 0.52 0.35		0.73 0.05 0.35 0.35	0.02		0.67 0.81 0.72 0.72	
RESONS	DEATES from	Diphtheria.	7.	0.55	0.25	60.0	0.32 0.21 0.38 0.10		0.38 0.43 0.28 0.06	0.05 0.24 0.33	0.34 0.02 0.19 0.59 0.14		
.000 Pi	DEAT	Scarlet Fever.	6.	0.50	0.03	0.05		0.15	0.00	0.03		0.00 0.00 0.00 0.00 0.00 0.00	
PER 1		Measies.	0.	99.0	1.78 0.46 0.38	0.67	1.37 0.10 0.75 1.01	1.80	0.27 0.08 0.08 0.49	0.16 0.55 0.13	0.96 1.26 1.00 2.19 2.36		
RATES		Small-pox.	4.	0.12	1 1 1	0.01	1111	1 1	1111	0.02	10.37	11111	0.05 0
ANNUAL RATES PER 1000 PERSONS LIVING.		Principal Xymotic Diseases.	3	23.2	2.65 1.16 1.04	2.18	3.24 1.15 2.74 1.87	1.21	2.48 2.29 0.85 2.57 1.92	1.41 1.54 0.92	13.12 1.72 4.35 3.74	8 2 5 4 7 4 2 8 2 8 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	
A		реатна.	.5	17.3	13.7	13.6	13.4	15.6	12.1 11.8 12.7 17.1 16.8	18.3	27.0 27.0 28.1 28.1		
		Вівтнз.	1.	30.1	26.9	32.5 27.3	29.52 2.4.7.4.0 2.4.7.4.0	24.2	28.02 28.02 28.03 28.03 28.03 38.03	26.0 27.0 20.5	35.7 30.1 36.8 35.4 30.9	25.55.55 25.55.55 25.55.55 25.55.55	34.3 30.9 28.7
		Towns* (Urban Districts).	Cols.	67 Towns	Hastings Eastbourne Bournemonth	• •		Cambridge	Leycon Wall hamstow Colchester Ipswich	Exeter Devonport Bath	St. George (near Bristol) Gloueester Cheltenham Longton Hanley Burton-upon-Trent	Walsall West Bromwich Dudley Vorcester	Aston Manor Coventry

TABLE 6 (continued). - Sixty-seven other large Towns. -Birth-rate, Death-rate, and Analysis of Mortality in 1896.

		Towns (Urban Districts).	Cols.	Lincoln. Grimsby.	Nacelespie. Nacelespie. Bodie. St. Heleus. St. Heleus. St. Heleus. Wigan. Wigan. Ashton-under-Lyne. Baryon. Ashton-under-Lyne. Rochdale. Accrinition. Barrow-in-Furness. Keighley. Wakefield. Barrow-in-Furness. Keighley. Makefield. Barnstey. Rotherham. York. Middlesbrough. Middlesbrough. Darlington.	West Hartiepool. South Shields. Janrow. Tynemouth. Carlisle. Newport. Watudyfodwg. Merthyr Tydffi.
GE ths.	·43.	Uncertified sauses of Dea	17.	61 H) O O H 4 T 10 H 10 M	0000 0000 0000 47750
PERCENTAGE to Total Deaths.	oil	Deaths in Pub snoitutitanI	16.	1.8	1117.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	287-28 E1-78 2880- 1448
PE to T		Inquest Cases.	15.	6.9	040F40J40J000044 80000000 000 0F0340F0FF00DF0	200000 04000
ANNUAL	living.	Aged 60 Years and upwards.	14.	63.0	28	633. 669.98 669.98 663.1 663.1
ANN	per 1000 living.	Aged 1 to 60 Years,	13.	7.1	0040040040000 00017.8011000000000000000000000000000000	0.000 000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.000 0.
	DEATHS	Year to 1000 Births.	12.	161	643 1221468 68333888888888889898	124 1138 1138 1138 1142 220 220
		Violence.	11.	0.41	90000000000000000000000000000000000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
		Diarrhoas.	10.	0.32	0.000000000000000000000000000000000000	0.40 0.54 0.10 0.10 0.18 0.98 1.13
G.		Ecver.	9.	0.25	211133	0.10 0.25 0.12 0.12 0.05 0.05 0.13 0.13 0.13 0.13
LIVIN	om	Whooping-	or	0.32	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0.21 0.38 0.74 0.08 0.47 0.58 0.17
RSONS	DEATES from	Diphtheria.	7.	0.14	0.10 0.10 0.10 0.10 0.10 0.10 0.10 0.10	0.00 0.11 0.13 0.21 0.21 0.26 0.26 0.26
000 PE	DEA	Scarlet Fever.	. 6.	0.02	00.00000000000000000000000000000000000	0.16 0.16 0.15 0.05 0.05 0.03 0.03 0.09
PER 1		Measles.	5.	0.50	00.00000000000000000000000000000000000	0.04 0.08 0.04 0.05 0.03 0.03 0.03 0.03 0.03 0.03
RATE		.xoq-llam2	4	1 1	1111111000	0.02
ANNUAL RATE PER 1000 PERSONS LIVING		Principal Zymotic Diseases,	ကိ	1.28	28 24 24 25 25 25 25 25 25 25 25 25 25 25 25 25	1.62 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.0
		Беатна.	29,	16.2	19.47 15.47 16.00	9,91 18.3 18.3 18.3 18.3 18.3 18.3 18.3 18.
		Вівтня.	1.	27.00 32.3	88 88 88 88 88 88 88 88 88 88 88 88 88	1.0
		Towns* (Urban Districts).	Cols.	Lincoln Grimsby	Stockport Macolesfield Chester Si. Helens Southort Wigan Warnington Hary Akhton-under-Lyne Accriticton Darwen Darwen Barrow-in-Purness Keighley Waketleid Barrow-in-Purness Gotherham York Middlesbrough Middlesbrough Middlesbrough Marlington Darlington Scockion-n-Res	West Hartlepool South Shields Jarrow Carlisle Newport Ystradyfowg Merthyr Tydil

Table 7.—Births and Deaths in 1896 (53 Weeks) in Edinburgh, Glasgow, and Dublin, and in certain Colonial and Foreign Citie

		certain	Colonial	and For	eign Ci	ties.						
	POPULATION				AL RATE	DI	SATHS	FROM	SOME	ZYMO	ric Di	SEAS
CITIES.	(enumerated	BIRTHS.	DEATHS.	Person	1000 is living.	-pox.	les.	et	the-	d.d.	ugm.	loeal
	estimated).	(Excluding	Stillborn.)	Births.	Deaths.	Small-pox.	Measles	Scarlet	Diphthe	Whoop-	Fever.	Diarrhoal
EDINBURGH	276,514	7686	4751	27.3	16.9		46	52				
GLASGOW	705,052	24216	14619	33.8	20.4	ì	831	149	-		-	
DUBLIN	349,594	10680	8856	30.1	24.9	4	10	148				
CALCUTTA (46 weeks)	466,460		13588		33.0	35	16	-	12	21		33
BOMBAY	821,764	16052	34661	19.2	41.5	702		2	9	21	5313	
MADRAS	452,518	18973	17365	41.2	37.8	39		?	9	2	6139	1
PARIS	2,511,629	59543	48546	00.0			222	4 200				000
BRUSSELS (with	518,387	13260	9617	23.3	19.0	23	,	173	454		271	280
Faubourgs).	010,031	13200	3017	25°2	18.2	1	208	-28	78	* 72	99	95
AMSTERDAM	489,496	14979	8680	30°1	17.4	-	175	37	2 = 1	200		
ROTTERDAM	276,338	10394	5225	37.0	18.6		52	20	157	162	13	1
THE HAGUE	187,545	5794	3114	30°4	16.3		65	12	46 23	113	32	1 . 5
COPENHAGEN	333,714	16351	5704	30.5	16.8	1	70	37				
STOCKHOLM	267,100	7136	4552	26.3	16.8	1	31	40	56	85	23	37
CHRISTIANIA	182,856	2131	3400	11.2	18.3	-	62	7	31*	179 107	16	43
ST. PETERSBURG (without Faubourgs).	954,400	32114	29955	33°1	30.9	143	714	864	877	245	1351	329
Moscow	753,469		29788		38.8	22	417	470	574			
BERLIN	1,695,313	46484						310	0/4	194	348	574
HAMBURG	625,552	21939	30892	27.0	17.9	4	222	392	528	548	85	339
DRESDEN	342,340	11390	11116	34'5	17.5	-	144	31	97*	172	36	76
BRESLAU	377,062	13289	6593	32.7	18.9	1	70	53	107*	165	14	670
MUNICH	406,000	14905	9634	34.7	25.1	-	105	162	127*	138	29	135
Vinne			9567	36'1	23*2	-	126	41	186*	114	14	1468
VIENNA PRAGUE	1,526,623	46510	34561	30.0	22.3	2	924	451	619*	168	79	3208
70 70	364,632	11605	9139	31°3	24.7	-	206	80	74	90	101	185
weeks).	579,275	21140	14400	37'3	25*4	13	189	184	199	39	167	1251
TRIESTE (48 weeks).	161,886	4611	4151	30.9	27.9	1	109	73	178*	6	21	267
Rome	473,296	11645	9189	24.2	19.1	_	187		40	0.0		je v s
TURIN	344,203	7460	6553	21.7	19.0	1	240	4 5	42	23	267§	759
VENICE	163,254	4202	4146	25.3	25.0	-	153	1	90 32*	55 17	83	356 877
CAIRO	374,838	22231	07070	70.0								
ALEXANDRIA	231,396	12166	21016 9978	58°3 51°7	55°2 42°4	125 61	348	3	129* 141*	109 23	539	4184 1853
NEW YORK	1,934,077		42142								206	
BROOKLYN	1,125,000		22789		21.4	1	730	413	1578	439	302	2881
Boston	516,305	15800	11634	30.6	19*9	1	337	155	1088	179	168	1698
PHILADELPHIA .	1,188,793	_	23982	30 6	22.5	-	27	121	516	67	162	713
CINCINNATI	350,000	7167	5916	20.5	19.8	-	191	61	1149	158	406	1385
St. Louis	570,000		9897	19.7	16.9	_	100	16	131 273	25 53	164	131 775
											230	

^{*} Including deaths from croup.
† Including 2088 deaths from cholera in Calcutta, 423 in Bombay, 95 in Madras, 1308 in Cairo, and 980 in Alexandria.
‡ Including 1805 deaths from bubonic fever.
§ Including 139 deaths from malarial fever.

TABLE 8.—LONDON.—Numbers of Natives and Immigrants respectively, living in LONDON, in 1881 and in 1891.

			МА	LES.	FEMA	ALES.	EXCESS OF FEMALES.			
			1881.*	1891.	1881.*	1891.	1881.*	1891.		
OTAL INHABITANTS -		-	1,797,043	1,990,748	2,018,501	2,220,995	221,458	230,247		
BORN IN LONDON - BORN OUT OF LONDON -	-	-	1,146,935 650,108	1,323,480	1,254,756 763,745	1,435,915 785,080	107,821 113,637	112,435 117,812		

^{*} The figures for 1881 relate to Registration London as constituted in 1891.

E 9.—GREATER LONDON (THE METROPOLITAN AND CITY POLICE DISTRICTS).—Area, Population, Inhabited Houses, and Ratable Value.

	AR	EA.	Enumerated		POPULA- in 1891.	INHABITED	RATABLE
	In Acres.	In Square Miles.	POPULATION, 1891.	Persons to an Acre.	Persons to a Square Mile.	Houses,	VALUE.* 1891.
EATER LONDON	443,421	693	5,633,806	12.7	8,130	789,408	£ 40,913,457
REGISTRATION LONDON OUTER RING	74,672 368,749	117 576	4,211,743 1,422,063	56°4 3°9	35, 998 2,4 69	544,977 244,431	32,932,967 7,980,490

^{*} Supplied from the London County Council and Metropolitan Police Offices.

BLE 10.—GREATER LONDON (THE METROPOLITAN AND CITY POLICE DISTRICTS).—Population; and Births and Deaths in the 53 Weeks of 1896.

	Popu-	Ann	UAL R	ATE	ţ.			The DEA	THS	registe	red in	the a	3 We	ks inc	lude	
• • •	LATION, estimated	per	1000 liv	ing.	TOTAL BIRTHS.	TOTAL	Deat	hs of			De	aths i	from			Prblic ions.
	to the middle of 1893.	Births.	Deaths.	Principal Zymotic Diseases.		DEATHS.	Infants under 1 Year of Age.	Persons aged 60 Years and upwards.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-	Fever.	Diarrhosa.	Deaths in Publ Institutions.
REATER LONDON -}	6,178,376	29*5	17.0	2.87	185,154	106,905	28,764	24,052	14	4598	1151	3291	3792	857	4296	25487
EGISTRATION }	4,421,955	30*2	18'6	3.14	135,796	83,511	21,853	18,370	9	3697	942	2683	2937	609	3223	23178
TER RING -	1,756,421	27.6	13°1	2.18	49,358	23,394	6911	5682	5	901	209	608	855	248	1073	2309

^{*} Sec note (†) to Table 1.

Table 11.—London.—Mortality in Five Groups of Districts (not corrected for deaths in Institutions) and Materialism at Groupsiah 1971 1996

10.1	nstitution	is), and	Meteo	rology a	t Green	nwich, 1	851-1	896.				
	LONDON.		GROU	PS OF DIS	TRICTS.							
NAME OF THE PARTY OF THE PARTY.	DONDON.	WEST.	NORTH.	CENTRAL.	EAST.	South.		METEOROLOGY AT GREENWICH.				
Area in Square Miles -	116.7	16:2	21.1	3*3	8.6	67*5		OREE	NWICH.			
Average Annual Rate of Increase of Popu- lation per Cent., 1891-96	0*932	0°998	0.925	-1·149 (de- crease).	0.316	1.506	i.	Saturation	1	d Move-		
Enumerated Popula- tion, 1896}	4,411,710	778,251	1,040,694	233,635	716,394	1,642,796	re of A		ů	rizonta		
Density: Persons 1861 1871 to an Acre 1881 1881 1891	30 36 42 49 56 59	35 44 52 62 71	36 46 56 67 74	203 175 150 127 116 110	78 92 107 116 128 130	14 17 21 28 35 38	Mean Temperature of Air.	Degree of Humidity,	Railfall, in Inches.	Mean Hourly Horizontal ment of the Air.*		
YEARS.	ANN	UAL RA	TE of M	ORTALI	TY PER	1000.	METE	OROLO	GY IN	EACH		
1851 1 1852	23°4 22°5 24°4 29°4 24°3 22°0 22°4 23°9 22°7 22°4	22°0 21°5 22°3 28°5 23°0 21°5 21°2 22°4 21°4 22°2	22·2 21·2 22·4 24·4 23·3 21·1 21·5 22·9 21·7 21·2	24·1 23·9 25·1 27·4 25·1 23·0 23·8 24·5 24·1 23·3	24·3 23·3 26·5 30·0 25·5 23·3 24·6 25·8 24·0 24·1	24.0 23.0 25.3 34.8 24.6 21.8 21.5 24.0 22.6 22.1	49°2 50°6 47°7 48°9 47°1 49°0 51°0 49°2 50°7 47°0	78 76 79 83 83 83 83 79 80 84	21.6 34.2 29.0 18.7 21.1 22.2 21.4 17.8 25.9 32.0	10·3 10·6 9·5 10·3 9·9 10·6 9·3 9·7 9·5 10·0		
1861	23°2 23°6 24°5 26°4 24°5 26°5 23°0 23°5 24°6 24°1	22·1 22·0 22·9 24·4 22·6 21·7 22·2 22·2 23·8	22·3 22·0 23·8 25·3 24·5 25·3 23·1 22·7 23·5 23·5	25.4 26.2 26.9 29.5 27.1 27.1 24.8 25.2 26.6 26.0	24.0 26.0 26.5 29.0 26.5 34.0 24.2 25.4 27.9 25.0	22.8 22.7 23.3 25.3 23.2 24.1 22.1 22.9 23.8 23.4	49.4 49.5 50.3 48.5 50.3 49.8 48.6 51.5 49.5 48.7	84 84 80 78 80 82 82 78 81 79	20·8 26·2 20·0 16·7 29·0 30·7 28·4 25·2 24·0 18·5	9.9 10.0 10.3 9.5 9.3 11.4 11.8 12.2 12.2		
1871 1 1872	24°6 21°5 22°4 22°4 23°6 21°9 21°6 23°1 22°6 21°7	22.5 19.6 20.5 20.5 20.9 22.2 21.0 19.2 21.6 20.9 19.8	25.6 21.2 21.2 21.7 22.2 21.7 22.2 21.5 22.0 21.5 20.8	25·0 23·6 25·1 25·7 26·2 24·2 25·2 26·3 23·8	26°1 23°6 25°3 25°5 25°7 24°0 24°5 25°1 25°5 24°3	24°0 20°7 21°7 21°0 23°3 21°2 20°5 23°0 21°8 21°3	48°7 50°7 48°9 49°3 49°2 50°1 49°4 49°6 46°2 49°4	81 82 82 82 80 80 79 81 83 84	22°3 30°0 23°4 20°0 28°2 24°2 26°9 29°2 31°3 29°8	10:5 11:9 11:8 11:5 11:5 12:1 13:0 11:1 11:3 11:7		
1881	21°5 20°8 20°9 20°4 20°6 20°3 19°3 18°4 21°4	19.6 20.0 19.8 19.7 19.9 19.8 19.9 19.3 18.1 20.5	20·7 19·8 19·4 19·6 19·3 18·9 17·7 16·9 19·6	23°4 24°0 23°3 23°8 22°9 23°4 23°5 22°7 20°9 24°8	24°3 25°3 24°4 23°4 23°9 23°9 23°3 22°7 21°2 25°1	20°5 20°8 19°8 20°2 19°1 19°9 19°4 18°1 17°7	48.7 49.7 49.4 50.7 48.6 48.7 47.7 48.8 47.7 48.8	81 84 82 80 81 79 82 83 81	25°2 25°2 21°9 18°1 24°0 24°2 19°9 27°5 23°3 21°9	12°1 12°8 12°1 11°9 12°0 11°8 11°5 12°3 -10°2 11°2		
1891	21.5 20.7 21.3 17.8 19.9	20.8 20.1 19.6 17.1 18.5	20°1 19°5 20°1 16°4 18°2	26.4 24.0 25.6 20.2 23.8	24·1 23·5 24·8 20·9 23·4	19.8 19.1 19.5 16.3 18.3	48.4 48.1 51.1 49.9 49.3	82 80 76 81 78	25°1 22°3 20°1 26°9 19°7	11.7 11.0 11.2 12.4 11.6		
1896	18.6	17.6	17.1	21.2	21.3	17.5	50.1	79	22*4	11.4		

Note.—The populations upon which these rates of mortality have been calculated are deduced from the numbers enumerated at the six Censuses of 1851, 1861, 1871, 1881, 1891, and 1896. The deaths used for the 45 years 1851–95 are for the calendar years, while those for 1896 are the numbers registered in the 53 weeks ending 2nd January 1897. The hamlet of Mottingham was transferred from Lewisham District to the Outer Ring on 1st April 1887. Certain changes affecting the West and Central groups of districts were made in the year 1868, but no corrections for these changes have been made in this Table for any year prior to 1861.

* Approximated to the results of Robinson's anemometer by reduction from Whewell's, up to 1859.

ABLE 12.—LONDON: Population at different Ages, as enumerated in 1851, 1861, 1871, 1881, and 1891, with the Numbers of Males and Females at the various Ages in 1891.

ALL AGES.	0-	5-	10-	15-	20-	25-	35-	45-	55—.	.65—	75-	85 and upwds.
2,362,236	293,562	243,648	216,369	213,694	241,401	428,123	308,949	208,363	122,946	62,608	19,845	2,728
2,803,989	362,296	300,259	264,349	259,155	277,389	476,802	366,417	246,918	149,503	74,039	23,721	3,141
3,254,260	422,629	349,686	309,658	307,075	321,585	551,973	404,954	290,977	174,265	90,198	27,604	3,656
3,816,483	497,044	419,740	366,111	368,628	385,236	641,265	471,131	320,530	205,921	103,815	32,982	4,080
4,211,743	501,622	454,160	416,425	416,820	428,454	717,514	519,637	368,536	221,551	122,726	39,172	5,126
1,990,748 2,220,995	249,309 252,313	225,895	206,228	197,424	194,110	333,689 383,825	246,219	173,111 195,42 5	98,776	50,407 72,319	14,070 25,102	1,510 3,616
	2,362,236 2,803,989 3,254,260 3,816,483 4,211,743	AGES. 293,562 2,862,236 293,562 2,803,989 362,296 3,254,260 422,629 3,816,483 497,044 4,211,743 501,622 1,990,748 249,309	AGES. 293,562 243,648 2,862,236 293,562 243,648 2,803,989 362,296 300,259 3,254,260 422,629 349,686 3,816,483 497,044 419,740 4,211,743 501,622 454,160 1,990,748 249,309 225,895	AGES. 32 2,362,236 293,562 243,648 216,369 2,803,989 362,296 300,259 264,349 3,254,260 422,629 349,686 309,658 3,816,483 497,044 419,740 366,111 4,211,743 501,622 454,160 416,425 1,990,748 249,309 225,895 206,228	AGES. 3 10 13 2,362,236 293,562 243,648 216,369 213,694 2,803,989 362,296 300,259 264,349 259,155 3,254,260 422,629 349,686 309,658 307,075 3,816,483 497,044 419,740 366,111 368,628 4,211,743 501,622 454,160 416,425 416,820 1,990,748 249,309 225,895 206,228 197,424	AGES. 3 10 23 2,362,236 293,562 243,648 216,369 213,694 241,401 2,803,989 362,296 300,259 264,349 259,155 277,389 3,254,260 422,629 349,686 309,658 307,075 321,585 3,816,483 497,044 419,740 366,111 368,628 385,236 4,211,743 501,622 454,160 416,425 416,820 428,454 1,990,748 249,309 225,895 206,228 197,424 194,110	AGES. 3 10 13 20 23 2,362,236 293,562 243,648 216,369 213,694 241,401 428,123 2,803,989 362,296 300,259 264,349 259,155 277,389 476,802 3,254,260 422,629 349,686 309,658 307,075 321,585 551,973 3,816,483 497,044 419,740 366,111 368,628 385,236 641,265 4,211,748 501,622 454,160 416,425 416,820 428,454 717,514 1,990,748 249,309 225,895 206,228 197,424 194,110 333,689	AGES. 0 3 10 3 20 20 30 2,362,236 293,562 243,648 216,369 213,694 241,401 428,123 308,949 2,803,989 362,296 300,259 264,349 259,155 277,389 476,802 366,417 3,254,260 422,629 349,686 309,658 307,075 321,585 551,973 404,954 3,816,483 497,044 419,740 366,111 368,628 385,236 641,265 471,131 4,211,743 501,622 454,160 416,425 416,820 428,454 717,514 519,637 1,990,748 249,309 225,895 206,228 197,424 194,110 333,689 246,219	AGES. 3 10 13 20 23 20 23 23 23 2,362,236 293,562 243,648 216,369 213,694 241,401 428,123 308,949 208,363 2,803,989 362,296 300,259 264,349 259,155 277,389 476,802 366,417 246,918 3,254,260 422,629 349,686 309,658 307,075 321,585 551,973 404,954 290,977 3,816,483 497,044 419,740 366,111 368,628 385,236 641,265 471,131 320,530 4,211,748 501,622 454,160 416,425 416,820 428,454 717,514 519,637 368,536 1,990,748 249,309 225,895 206,228 197,424 194,110 333,689 246,219 173,111	AGES. 0 3 10 13 20 20 30 40 30 20 2,362,236 293,562 243,648 216,369 213,694 241,401 428,123 308,949 208,363 122,946 2,803,989 362,296 300,259 264,349 259,155 277,389 476,802 366,417 240,918 149,503 3,254,260 422,629 349,686 309,658 307,075 321,585 551,973 404,954 290,977 174,265 3,816,483 497,044 419,740 366,111 368,628 385,236 641,265 471,131 320,530 205,921 4,211,743 501,622 454,160 416,425 416,820 428,454 717,514 519,637 368,536 221,551 1,990,748 249,309 225,895 206,228 197,424 194,110 333,689 246,219 173,111 98,776	AGES. 3 10 13 20 <	AGES. 2 3 10 20 20 20 30 40 30 10 10 2,362,236 293,562 243,648 216,369 213,694 241,401 428,123 308,949 208,363 122,946 62,608 19,845 2,803,989 362,296 300,259 264,349 259,155 277,389 476,802 366,417 246,918 149,503 74,039 23,721 3,254,260 422,629 349,686 309,658 307,075 321,585 551,973 404,954 290,977 174,265 90,198 27,604 3,816,483 497,044 419,740 366,111 368,628 385,236 641,265 471,131 320,530 205,921 103,815 32,982 4,211,743 501,622 454,160 416,425 416,820 428,454 717,514 519,637 368,536 221,551 122,726 39,172 1,990,748 249,309 225,895 206,228 197,424 194,110 333,689 246,219 173,111 98,776 50,407 14,070

Note.—In England and Wales the proportion of Females to Males in the population in 1891 was as 106 to 100; in London it was as 112 to 100. The proportions in 1881 were 105 and 112 respectively. The figures in this table refer to condon as constituted in the respective census years.

Table 13.-LONDON: Marriages, Births, and Deaths, 1886-1896.

YEA	RS.		1886.	1887.	1889.	1889.	1890.	1891.	1892.	1893.	1894.	1895.	1896 (53 weeks).
[ARRIAGES	* *	-	34,482	34,251	34,635	35,412	36,752	87,341	37,191	37,016	36,924	37,629	39,869
	Persons	-	134,339	133,359	131,761	132,233	128,161	134,484	132,328	133,062	131,454	134,155	135,796
irths	Males Females		68,507 65,832	67,569 65,790	66,919 64,842	67,398 64,835	65,168 62,993	€8,383 66,101	67,443 64,885	67,688 65,374	66,866 64,588	68,281 65,874	69,536 66,260
	Persons		82,691	82,443	79,244	76,162	89,268	90,595	88,410	91,552	77,407	87,298	83,511
DEATHS* - <	Males Females		42,257	42,201 40, 2 42	40,495 38,749	38,947 37,215	45,959 43, 3 09	46,487 44,108	4 4,851 4 3,589	46,840 44,712	39,704 37,703	44,343 42,955	43,069 40,442
XCESS OF BI DEATHS -	RTHS OVER	}	51,648	50,916	52,517	56,071	38,893	43,889	43,888	41,510	54,047	46,857	52,285
ANNUAL RATES PER 1000.		}	17·2 33·4 20·6	16·9 32·9 20·3	16·9 32·1 19·3	31·9 18·4	17.6 30.7 21.4	17·7 31·9 21·5	17·4 31·0 20·7	30·9 21·3	17·0 30·3 17·8	17·2 30·6 19 9	18·0 30·2 18·6

Note.—The figures in the above table, except those for 1896, relate to the calendar year ending 31st December. The gures for 1896 relate to the 53 weeks ending 2nd January 1997.

* See note † to Table 1.

TABLE 14.-LONDON .- Population, and Zymotic and

			1	ABLE	14.—L(NDON	.—Pol	ulatio	n, and	Zymo	tic and
	TION.			DEAT	HS FROM	PRINCI	PAL ZYM	otic D	ISEASES.		
PERIOD AND YEAR.	ESTIMATED POPULATION.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough,	Typhus.	Enteric Fever.	Simple and III- defined Fever.	Diarrhos and Dysentery.	Cholera,
Cols 1	2	3	4	5	6	7	8	9	10	11	12
Period. 1841-50 1851-60	2,103,487	8,416 7,150	13,011 13,766		,314	18,079 22,497	-	20,890	-	16,926 26,362	15,588
1861-70	3,018,193	8,347	17,338	34,391	5,323	26,550		27,149		31,578	12,886 7,403
1871-80	3,513,843	15,539	17,947	21,247	4,319	28,728	1,887	8,536	2,579	33,168	1,328
1881-90	4,000,475	5,634	25,449	13,268	10,435	27,686	327	7,502	717	29,922	941
					-						
1847 1848 1849 1850	2,202,673 2,244,837 2,287,302 2,330,054	955 1620 521 499	1778 1144 1154 980	. 47	433 767 149 169	1600 1630 2349 1568		3297 3685 2564 2032		2283 2247 3837 2077	117 652 14,125 127
1851 1852 1853 1854 1855 1856 1857 1858 1859 1860	2,973,081 2,416,367 2,459,899 2,503,662 2,547,639 2,591,815 2,636,174 2,680,700 2,725,374 2,770,181	1062 1159 211 694 1039 531 156 242 1158 898	1297 595 978 1409 878 1479 1341 2369 1330 2090	25 20 34 26 18	285 571 5016 477 511 819 999 84 773 484	2185 1569 2667 2502 2438 2092 2527 2708 1742 2067		2374 2183 - 2617 2816 2460 2717 2195 1919 1840 1476		2755 2513 2649 3325 2190 2414 3298 2220 3513 1485	213 162 883 10,738 149 152 214 131 193 51
1861 1862 1863 1864 1865 1866 1867 1868 1869 1870	2,815,101 2,860,117 2,905,210 2,950,361 2,995,551 3,040,761 3,085,971 3,131,160 3,176,308 3,221,394	217 366 1996 547 640 1391 1345 597 275 973	1062 2334 1634 2788 1290 2220 1143 1962 1456 1449	2381 3492 4955 3244 2179 1892 1451 2916 5841 6040	674 730 790 611 431 462 447 495 340 334	3548 2168 2175 2423 2935 2960 2278 2338 3769 1956	716 472	1843 3673 2871 3782 3217 2688 2184 - 2468 1069 976	615 570	2740 1839 2492 3013 3721 3294 3060 4110 3495 3814	168 106 159 156 196 5596 240 324 219 239
1871 1872 1873 1874 1875 1876 1877 1878 1879 1880	3,267,251 3,319,736 3,373,065 3,427,250 3,482,306 3,538,246 3,595,085 3,652,837 3,711,517 3,771,139	7912 1786 113 57 46 736 2551 1417 450 471	1427 1680 2149 1680 1408 1720 2387 1500 2475 1521	1902 918 645 2648 3677 2308 1580 1808 2661 3100	344 267 320 419 581 387 316 566 575 544	2291 3259 2620 1867 3204 2737 1817 4483 2934 8516	384 174 277 312 128 159 157 151 71	871 807 908 879 817 769 901 1033 819 702	436 322 325 337 272 202 194 197 160 134	3968 3588 3950 3201 3289 5585 2421 3534 1894 3738	221 181 162 123 108 135 88 124 53 133
1881 1882 1883 1884 1885 1886 1887 1888 1889 1890	3,824,980 3,862,956 3,901,309 3,940,042 3,979,160 4,018,666 4,058,565 4,098,860 4,139,555 4,180,654	2367 430 136 1236 1419 24 9 9	2536 2338 2441 2271 2909 2086 2904 2425 2308 3231	2114 2006 2006 1430 722 690 1443 1214 785 858	657 857 952 951 904 851 953 1511 1617	1973 4682 1598 3156 2481 2871 2935 2993 1787 3210	92 53 55 32 28 13 19 9 16	971 975 963 925 597 618 612 694 538 609	134 95 102 78 78 73 44 35 42 36	3055 2144 2652 3903 2723 3996 3801 2206 2692 2750	95 79 83 163 77 137 107 54 62 84
1891 1892 1893 1894 1895 1896	4,221,522 4,260,869 4,300,580 4,340,663 4,381,119 4,421,955	8 41 206 88 55 9	1807 3415 1652 3295 2692 3697	598 1167 1590 966 829 942	1435 1969 3271 2707 2344 2683	2872 2507 2326 2096 1517 2937	11 11 5 6 4 5	558 436 692 640 628 591	44 22 21 13 9 13	2483 2557 3427 1745 3614 3223	71 87 133 32 74 95

Note.—Wandsworth was not included in Registration London until 1844, nor Lewi-ham and throughout, but the population in each year refers

For the years 1846-50 the numbers of deaths from the various diseases are derived from The figures for 1896 are for the

Infant Mortality in 50 Years 1847-96.

	Mort	anty 1	n 50 Y	rears	1847-	96.					
	Asnı	UAL MOI	PRINCI			Persons Iseases.		, FROM	,	Infants f Age to	
Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple and III- defined Pever,	Diarrhosa and Dysentery.	Cholera.	Annual Mortality of Infants under One Year of Age to 1000 Births,	PERIOD AND YEAR.
13	14	15	16	17	18	19	20	21	22	23	24
402	623		863	867		979		782	688	157	Period. 1841-50
280	530	10	017	877		. 886		1030	514	155	1851-60
276	576	1133	179	882		904		1040	243	162	1861-70
457	510	600	122	815	55	244	75	949	38	158	1871-80
145	636	335	259	693	8	189	18	748	23	152	1881-90
			· ·								
427 724 229 215	795 511 506 422	21	840 131 943 503	.715 729 1030 675		1474 1647 1125 875	* .	1020 1004 1683 894	52 291 6196 55	166 158 169 140	1847 1848 1849 1850
448 478 86 277 408 204 59 90 425 323	547 246 398 563 345 569 509 884 488 752	10 8 13 10	541 961 320 389 925 700 607 661 284 174	921 648 1084 999 957 805 959 1010 639 744		1000 901 1064 1125 966 1045 833 716 675 531		1161 1037 1077 1328 860 929 1251 828 1289 535	90 67 359 4289 58 58 81 49 71 18	154 151 158 164 152 150 156 160 150 153	1851 1852 1853 1854 1855 1856 1857 1858 1859 1860
77 128 687 185 214 457 436 190 87 302	377 816 562 942 431 730 870 625 458 450	846 1221 1706 1097 727 622 470 929 1839 1875	239 255 275 207 144 152 145 158 107 104	1260 758 749 819 980 973 738 745 1187 607	225 147	656 1284 988 1278 1074 884 708 	194 177	973 643 858 1018 1242 1083 992 1309 1100 1184	60 37 55 53 65 1840 78 103 69 74	155 143 151 169 171 172 159 166 170 164	1861 1862 1863 1864 1865 1866 1867 1868 1869 1870
2422 537 3 6 17 13 207 710 388 121 125	437 505 637 490 404 485 664 411 667 402	582 276 191 773 1056 651 439 495 717 820	105 80 95 122 167 109 88 155 155 144	701 979 777 545 920 771 505 1227 791 930	118 52 82 91 37 45 44 41 19 20	267 242 269 256 235 217 251 283 229 186	133 97 96 98 78 57 54 54 43	1214 1078 1171 934 944 1010 678 967 510 989	68 54 48 36 31 38 24 34 14	171 158 160 156 162 157 146 164 148	1871 1872 1873 1874 1875 1876 1877 1878 1879
619 111 35 313 357 6 2 2 2	663 605 626 575 731 519 716 590 558 773	553 519 514 362 181 172 356 295 190 206	172 222 244 241 227 212 235 319 391 331	516 1212 410 799 624 714 723 728 432 768	24 14 14 8 7 3 5 2 4	254 252 247 234 150 154 151 169 130 146	35 24 26 20 20 18 11 9	799 555 680 983 684 994 937 537 650 658	25 20 21 41 19 34 26 13 15	148 151 146 156 148 159 158 146 141 163	1881 1882 1883 1884 1885 1886 1887 1888 1889 1890
2 10 48 20 13 2	428 799 384 759 614 823	142 273 370 223 189 210	340 461 761 624 535 597	680 587 541 483 346 653	3 1 1 1 1	132 102 161 147 143 131	10 5 5 3 2 3	577 598 797 402 825 717	17 20 31 7 17 21	155 155 164 143 166 161	1891 1892 1893 1894 1895 1896

Hampstead until 1847; thus the figures in the above Table do not relate to the same area to the same area as the facts in the other columns.

summaries of 52 or 53 weeks; the numbers for the 45 years 1851-95 relate to calendar years. 53 weeks ending 2nd January 1897.

Table 15 .- Causes of Death Registered in London in each of the 11 Years 1886-1896.

	_											
CAUSES OF DEATH.	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	Corrected*	1896
-	364 Days.	364 Days.	364 Days.	364 Days.	371 Days.	364 Days.	364 Days.	364 Days.	364 Days.	364 Days.	Averages, 1886-95.	371 Days
ALL CAUSES -	\$2276	\$2208	‡ 78848	‡ 75683	‡ 91243	‡ 90216	‡ 87749	‡ 91536	‡ 77039	‡ 86937	90365	\$ 83511
Small-pox {Vaccinated Unvaccinated No statement	9 8 7	1 1 7	- 5 - 4		- 1 3	2 3 3	15 14 12	62 79 65	24 43 22	16 26 13	14 19 15	- 4
Measles -	2078	2894	2401	2314	3291	1807	3393	1661	3293	2633	2759	3697
Scarlet Fever Typhus	688 13 1	1447 18	1209 10	784 15 1	876 11 -	589 8	1174 11 1	1596 5	962 5	829 5	1088 11 0	942 5
Influenza	2834	5 2928	3 2987	5 1540	652 3276	2336	2264	1526	750	2156	1039	496
Whooping-cough Diphtheria Simple & Ill-defined Fever Enteric Fever Cholera and Chol, Diarr.	846 70 618 137	2928 961 48 606 106	2987 1301 33 677 54	1749 1588 43 538 62	3276 1417 33 618 83	2876 1361 42 547	2477 1885 20 436	2330 3265 21 693	2097 2670 13 635	1483 2316 10 614	2681 1886 36 641	2937 2683 13 591
Diarrhoea, Dysentery	3950	3773	2176	2677	2753	73 2437	87 2546	133 3446	32 1780	74 3600	90 3121	95 3223
Remittent Fever Hydrophobia - Glanders Cowpox and Vaccination -	20 9 2	14 2 4 9	9 3 1 4	12 7 2 11	7 2 1 7	2407 4 2 4 14	2546 3 - 4 20	2 1 3 15	1780 2 1 1 9	3600 1 - - 20	3121 8 3 2 12	2 4
Venereal Affections	544	498	516	544	541	472	502	544	499	501	553	7 445
Ervsipelas	257 134	341 155	249 152	189 106	250 135	214 105	292 110	424 118	221 96	179	280	207
Pyæmia Septicæmia Puerperal Fever Other Zymotic Diseases	279 70	328 100	275 76	222 81	237 63	222 73	313 88	352 94	210 - 70	102 208 79	130 283 85	90 225 80
Thrush Worms and other Para-	113 18	80 22	63 14	83 14	77 17	59 15	. 74 15	43 17	42 17	40 21	72 18	32 9
Starvation, Want of Breast Milk	91	77	61	92	73	78	115	155	96	95	100	62
Alcoholism, Delirium	220	248	298	386	475	485	483	533	430	449	429	540
Rheumatic Fever, Rheumatism of Heart	362	418	397	331	445	384	410	517	352	286	418	403
Rheumatism Gout Rickets	104 139 218	115 157 180	108 138 230	131 164 230	114 169 282	113 161 267	117 157 287	112 187 248	75 154 255	80 169 339	114 171 272	118 149 248
Cancer Tabes Mesenterica - Tubercular Meningitis -	2688 1591 1253	2874 1406 1245	2856 1249 1220	2982 1261 1189	3258 1392 1237	3277 1277 1194	3166 1298 1229	3412 1269 1180	3441 954 1093	3612 1253 1244	3381 1387 1294	3864 1066 1187
Phthisis Scrofula, Tuberculosis - Other Constitutional Dis.	8332 954 521	7740 912 542	7459 862 546	7748 896 528	9074 950 595	8485 1035 640	8036 1012 632	8179 943 679	7543 980 627	7974 1045 677	8629 1027 641	7778 1005 699
Premature Birth Atelectatis Congenital Malformations	1930 128 319 2651	1975 138 352 2458	1938 161 345 2485	2025 127 367 2591	2249 113 348 2711	2349 140 394 2567	2394 158 378 2382	2517 179 388 2647	2361 206 405 2135	2514 209 388 2468	2383 167 395 2688	2534 246 422 2204
	2133	2038	2236	2078	2313							2294
Apoplexy	2133 369	2038 345	2236 365	2078 360	2313 443	2306 437	2206 395	2200 404	1990 350	2052 370	2308 411	2136 367
Convulsions	2390	2379	2392	2203	2353	2385	2148	2194	1856	2052	2394	1868
Other Dis. of Brain, &c	4462	4465	4364	4156	5003	4675	4222	4554	3911	4162	4710	4104
Diseases of Organs of } Special Sense }	138	98	116	114	144	134	142	182	162	168	150	190
Diseases of Circulatory } System }	6117	6290	6259	6460	7546	7340	7061	7099	6041	6905	7188	6881
				1								

^{*} The annual averages have been raised for increase of population and for comparison with the deaths recorded in the 53 weeks of 1896.

\$ See note (†), Table 1.

TABLE 15 (cont.)—Causes of Deaths REGISTERED in London in each of the 11 Years 1886-1896.

` ′				TVEGIGI.	LIKED .	ш 1101	iuon)	in each	or th	e 11 1	Ke a rs 1886-	-1896.
CAUSES OF DEATH.	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	Corrected* Annual	1896
	364 Days.	364 Days.	364 Days.	364 Days.	371 Days.	364 Days.	364 Days.	364 Days.	364 Days.	364 Days.	Averages, 1886-96.	371 Days.
Croup Bronchitis Pneumonia Pleurisy Other Diseases of Respi- ratory System	523 11282 4661 261 1587	597 10326 4797 323 1535	494 10085 4657 267 1493	480 8970 4061 239 1311	491 12448 6224 329 1694	404 13136 6915 366 1668	277 11183 6164 305 1450	217 10413 7198 402 1524	166 7816 5321 241 1097	144 10633 5989 280 1436	406 11385 5996 323 1585	147 7558 5537 251 1171
Dentition - Sore Throat, Quinsy - Enteritis - Peritonitus - Diseases of Liver - Others, Digestive System	693 89 518 323 1524 1561	623 107 509 338 1462 1430	603 102 464 334 1330 1530	545 92 570 352 1321 1425	628 120 745 372 1373 1540	520 92 758 365 1303 1523	479 97 776 326 1242 1518	493 130 1106 393 1296	417 81 917 316	426 83 1487 300 1170	581 106 841 366 1411	464 71 1680 284 1215
Diseases of Lymphatic System and Ductless Glands	115	95	95	108	129	115	87	1682	1520	108	1645	1524
Diseases of Urinary System	2049	2100	2116	2020	2209	2305	2168	2355	2056	2230	2314	2277
Diseases of Generative System } Accidents of Childbirth -	283	297 163	270 169	253 166	315 212	280 286	250 304	303 335	257 -266	288 212	299 248	280 280
Diseases of Locomotive System -	389	345	368	375	392	330	331	262	310	253	359	256
Diseases of Integumentary System	273	273	258	217	293	325	334	333	263	303	308	286
ACCIDENT OR NEGLIGENCE.‡						10*			0.7			
By Railways By Vehicles or Horses In Ships, &c. (not drowning) In Building operations In Conflagrations By Burns, Scalds, Explosions By Drowning By Suffocation in Bed By Poison or poisonous Vapours Dther or not stated Causes	2393	2548	2506	2475	2660 {	125 244 21 42 30 285 298 626	30 40 34 323 322 621 90 868	75 304 22 41 26 349 342 574 104 1081	81 255 31 33 26 325 311 518	84 290 37 39 23 357 307 631	2828	79 300 28 57 47 373 260 643
Homicide.‡ furder and Manslaughter	68	80	76	79	73	-67	67	58	-58	72	75	70
SUICIDE.‡	402	398	400	3 73	351	430	450	448	464	482	450	426
EXECUTION.	-	2	1	1	4	3	6	1	1	3	2	To the state of th
LL OTHER CAUSES -	3258	3060	2923	2784	3003	2911	3044	3262	2665	3118	3216	2719
* See note * on preceding	nage.					-			1			

^{*} See note * on preceding page.

‡ The evidence at inquests is often insufficient to enable the coroner to certify whether a violent death resulted from coident, murder, manslaughter, or suicide. All such cases are classed under "accident or negligence."

Table 16 .- Deaths Registered from different Causes in London, in each Quarter of 1896, and in several Groups of Ages during the 53 Weeks of 1896.

		,01111											-
Ī		C	Quarter	ending				Year	1896.				
l	CAUSES OF DEATH.	March 28th (13 wks.)	June 30th (13 wks).	Sept. 30th (13 wks.)	Jan. 2nd 1897 (14 wks.)	TOTAL ATALL AGES.*	Under 1 Year.	1 and under 5.	5 and under 20.	20 and under 40.	40 and under 60.	60 and under 80.	80 and upwds
I	ALL CAUSES †	21619	19696	20729	21467	83511	21853	13746	5142	9867	14534	15113	3256
I	$\begin{array}{c} \mathbf{Small\text{-}pox} \\ \mathbf{Vaccinated} \\ \mathbf{No} \ \mathbf{Statement} \end{array} .$	- 2 3	1 2	_1	. =	- 4 5	- 2 2	-	1 1	- 1 2	-	12	-
1	Measles	1384	1632	497	184	3697	790	2691	204	7	. 2	-	-
ı	Scarlet Fever	264 1	197	218	263	942 5	61	585	271 2	21	4 2	- 1	-
ı	Typhus Relapsing Fever	168	129	42	- 157	496	43	29	25	98	135	142	24
١	Whooping-cough	979	1188	504	266 785	2937 2683	1223 150	1615 1665	96 817	1 38	1 11	1 2	-
ı	Diphtheria Simple and Ill-defined Fever	683 4 137	566 3 82	649 2 163	209	13 591	1 4	2 27	3 199	265	82	1 14	-
۱	Enteric Fever Cholera and Chol. Diarr.	197	5	89	1	95	69	14	1	2	7	2	
ı	Diarrhœa, Dysentery	129	269	2624	201	3223	2572	413	_11	1 2	43	127	38
١	Remittent Fever Hydrophobia	3	1	- 1		4	-	-	3		_ 1	_	-
ı	Glanders - Cowpox and Vaccination -	2	2	1	2	7	7	-		-	-	-	-
ı	Venereal Affections Erysipelas	116 45	110 39	104 51	$\frac{115}{72}$	445 207	276 56	21 5	- 4	38 17	71 55	32 59	11
ı	Pyæmia, Septicæmia Puerperal Fever	22 59	28 47	22 53	18 66	90 225	19	- 4	12 7	24 204	21 14	10	=
Ì	Other Zymotic Diseases	27	15	15	23	80	22	24	8	9	9		-
١	Thrush	6	3	13	10	32	31	1	-		-	-	-
l	Worms and other Parasitic	-	2	3	4	9	-	1	2	3	1	2	-
١	Starvation, Want of Breast-}	19	13	18	12	62	59	2	_	_	-	, _	1
ı	milk 5 Alcoholism, Delirium Tremens	110	129	141	160	540	-	-	-	177	306	55	2
1	Rheumatic Fever, Rheuma-	90	63	103	147	403	-	14	128	152	74		1
١	tism of Heart 5 Rheumatism	26	30 38	30 34	32 30	118 149	_ 2	-	3	20	22 31 21	61 76	1
١	Gout	47 73	64	56	55	149 248	99	146	3 42	316	21 1797	1571	110
	Cancer Tabes Mese terica	903 198	1015 203	918 453	1028 212	3864 1066 1187	675 342	242 582	89 215	39	15	6	
	Tubercular Meningitis Phthisis	264 1933	336 1861	325 1792	262 2192	7778	91	190	604	3564	2796	522	1:
ı	Scrofula, Tuberculosis - Other Constitutional Diseases	258 172	258 147	273 144	216 236	1005 699	244 26	260 22	197 56	182 109	91 204	263	1
I		201	557	709	711	2534	2534	-		_	-	_	-
	Premature Birth Atelectasis	564	49 96	702 57 109	84	246 422	246 394	13	- 11	- 3			_
Ì	Congenital Malformations - Old Age	105 594	500	531	669	2294	-		-	-	4		118
	Apoplexy	544	507	457	628	2136	24	13	16	117 119			
	Epilepsy	106	87 444	69 487	105 495	367 1868	11 1658	203	56	-	-00	80	-
	Convulsions Other Diseases of Brain, &c	1036	1001	1019	1048	4104	552	492		. 412	896	1264	23
					·	100	41	38	61	31	11	3	
	Diseases of Organs of Special Sense	41	50	- 51	48	190	41	- 35			-		-
	Diseases of Circulatory System	1842	1552	1463	2024	6881	114	53	494	995	2101	2795	32
		_											

^{*} For the population in each group of ages, estimated to the middle of 1896, see Table 23.

† See note 7, Table 1.

‡ Those cases of small-pox only are returned as "Vaccinated" or as "Unvaccinated" which are so certified by registered medical men. When the medical attendant does not certify that the deceased has, or has not, been vaccinated or when the cause of death is not certified by a registered practitioner, the case is returned under the heading "No Statement."

Table 16 (continued).—Deaths Registered from different Causes in London, in each Quarter of 1896, and in several Groups of Ages during the 53 weeks of 1896.

		Quarter	ending					Year	1896.			
CAUSES OF DEATH.	March 28th (13 wks.)	June 30th (13 wks.)	Sept. 30th (13 wks.)	Jan. 2nd 1897 (14 wks.)	TOTAL AT ALL AGES.*	Under 1 Year.	1 and under 5.	5 and under 20.	20 and under 40.	40 and under 60.	60 and under 80.	80 and upwds.
Croup	42	35	27	43	147	14	117	16	_ '	-	-	-
Bronchitis	2544	1453	826	2735	7558	2273	1118	. 67	184	972	2388	556
Pneumonia Pleurisy Other Diseases of Respiratory	1744 64	1340 67	816 52	1637 68	5537 251	1546 17	1743 35	234 16	510 51	749 .82	659 41	96 9
System	367	248	197	359	1171	224	198	54	75	239	323	58
Dentition Sore Throat, Quinsy	123 6	116 17	119 27	106 21	464 71	300 12	164 24	-20	6	7	- 2	- 1
Enteritis	170 72	219 73	1050 70	241 69	1680 284	1112 15	213 12	83 70	94 83	73 59	96 40	9 6
Diseases of Liver Others, Digestive System .	· 279 390	259 353	343 411	334 370	1215 1524	93 364	13 90	19 97	165 215	553 316	355 355	17 85
Diseases of Lymphatics, &c	27	33	35	24	119	4	6	16	. 38	33	20	2
Diseases of Urinary System -	606	521	494	656	2277	29	56	75	340	846	826	105
Diseases of Generative System Accidents of Childbirth -	68 72	62	,76 : 56	74 83	280 280	, _ '6	5	3	95 228	126 · 45	41	- 4
Diseases of Locomotive System	7,5	59	. '59	63	256	23	30	73	42	38	45	5
Diseases of Integumentary System -	67	54	78	87	286	87	16	7	20	5 3	83	20
VIOLENT DEATHS.+ (ACCIDENT.)												
By Railways By Vehicles or Horses In Ships, Boats, Docks (exclusive of Drowning)	18 56	21 91	26 82	14 71	300	. 2	1 42	8 63	36 68	26 64	58	3
In Building Operations	14	9 11	6 16	8	28 57 47 373	-	-	2	7 19	18 32	1 4	-
In Conflagrations By Burns, Scalds, Explosions By Drowning By Suffocation in Bed	18 111 54 167	72 70 147	5 66 88 107	16 124 48 222	373 260 643	25 6 626	10 195 8 7	10 66 68 3	8 21 83 3	7 27 76 1	8 33 18	- 6 1
By Poisons or Poisonous Vapours Other or not stated Causes -	23 262	27 238	29 257	21 292	100 1049	3 175	11 88	11 121	33 177	35 222	210	56
(VIOLENCE OTHER THAN ACCIDENTAL.)												
Homicide Suicide	16 111 2	13 118 4	21 107 -	20 90 1	70 .426 7	30 -	-	13 -	26 177 4	9 167 3	8 68	- 1
OTHER CAUSES	588	567	896	668	2719	2419	153	11	20	54	49	13
+ 0 1 + 7												-

^{*} See note * on preceding page.
† The evidence at inquests is often insufficient to enable the coroner to certify whether a violent death resulted from accident, murder, manslaughter, or suicide. All such cases are classed under "accident or negligence."

Table 17.—Deaths Registered in the London Registration Districts, and Mean Temperature and Registered Sunshine at Greenwich, in each of the 11 Years 1886-1896.

and accesso				GI COI	-WICII	, III Ca	ich of	the 11	Tears	1000.	-1090;		
REGISTRATION DISTRICTS.	AREA in Acres.*	Persons to an Acre, 1896.	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896
Mean Temperature	_		48°-7	470.8	470.7	48° 8	48°.6	49°•4	480.1	510.1	490.9	490.3	500.1
Registered Sunshine in Hours		-	1228	1401	1068	1156	1255	1222	1277	.1454	1052	1225	1016
								· · · · ·	· ·				
LONDON	74,672	59	82,691	82,443	79,244	76,162	89,268	90,595	88,440	91,552	77,407	87,298	83,511
						,							
1a. PADDINGTON	1256	99	2062	2023	2152	1925	2276	2347	2311	2280	1925	2260	2100
16. KENSINGTON	2188	- 78	3101	3126	3082	2710	3309	3634	3303	3223	2983	3070	3155
2. Fulham	3987	55	2781	3201	3207	3183	3632	3644	3895	3886	3625	3981	3930
3. CHELSEA	794	122	2144	2188	1997	1981	2064	2232	2173	2127	1735	2013	1907
4. St. GEO. HANOVER	1940	69	3103	2923	2855	2713	3090	2984	2821	2774	2367	2557	2371
5. WESTMINSTER	216	162	788	734	634	692	691	642	567	578	467	507	527
6. MARYLEBONE	1506	94	2880	2657	2606	2363	2797	2834	2689	2651	2226	2494	2493
7. HAMPSTEAD	2248	34	774	771	778	835	1064	1019	1173	1452	1325	1278	1303
8. PANCRAS	2672	90	5058	5085	4782	4664	5166	5384	5243	5208	4252	4908	4535
9. Islington	3109	108	5510	5756	5206	5093	5962	6326	5983	6317	5103	5779	5747
10. HACKNEY	3937	63	3789	3847	3823	3613	4399	4417	4509	4757	3827	4484	4069
11. St. Giles	244	157	894	870	694	704	821	893	4733	710	603	715	583
12. STRAND	403	62	989	912	923	885	910	1052	929	962	821	918	817
13. HOLBORN	811	171	2964	3004	2937	2530	3088	3282	2984	3096	2297	2826	2501
14. LONDON CITY	672	47	1343	1364	1308	1177	1380	1295	1191	1388	1058	1133	1121
15. SHOREDITCH	648	189	3216	3071	2962	2635	3248	3192	2939	3196	2569	2974	6000
16. BETHNAL GREEN .	755	171	3000	2845	2852	2620	2876	3107	2824	3034	2411	2579	2666
17. WHITECHAPEL	379	208	2261	2249	2181	2176	2492	2437	2355	2683	2322	2552	2717 2359
18. St. GeoIN-THE-EAST	244	195	1187	1161	1120	1018	1309	1102	1026	1153	952	1095	958
19. STEPNEY	465	125	1317	1333	1354	1266	1500	1320	1375	1396	1206	1354	1211
20. MILE END OLD TOWN	677	164	2142	2129	1987	1948	2263	2070	2250	2166	1960	2205	1996
21 POPLAR	2333	73	3617	3521	3521	3274	3989	3770	3872	3925	3384	3931	3629
22. St. SAVIOUR SOUTH-	1119	185	4555	4469	3597	3797	4171	4187	3939	4075	3 306	3987	3430
23. St. OLAVE SOUTH-}	1506	91	3397	3359	3168	3109	3461	3552	3369	3461	2983	3233	3259
24. LAMBETH	3941	75	5481	5430	5182	5166	5819	6085	5841	6165	5225	5887	5369
25. WANDSWORTH	11454	31	4424	4317	4330	3973	4905	4787	5016	5093	4497	5391	5593
26. CAMBERWELL	4450	57	3995	4140	4187	4193	4624	4876	4984	5024	4307	4953	4857
27. GREENWICH	3425	51	3005	3117	3017	3065	3320	3498	3482	3692	3080	3373	3412
28. LEWISHAM	10793	10	1175	1176	1216	1123	1254	1326	1370	1384	1298	1444	1434
29. Woolwich •	6500	. 18	1711	.1645	1559	1717	1906	2013	1812	1971	1585.	1782	1970
METROPOLITAN HOS- PITALS AND ASYLUMS OUTSIDE REGISTRA- TION LONDON† -	-	-	28	20	27	14	1482	1288	1482	1725	1708	1635	1492
						- 1				1	- 1	1	

Note.—This Table is compiled from the Abstracts which appear in the Registrar General's Annual Reports, excepting for the year 1896, for which the numbers are derived from the Weekly Returns embracing 53 weeks.

^{*} For area of Greater London see Table 9.

[†] For the years 1886-89 the figures refer to the Metropolitan Asylum Small-pox and Fever Hospitals only; for the years 1890-1896 the London County, and Metropolitan Lunatic and Imbecile Asylums are added.

BLE 18.—LONDON.—Population; and Births and Deaths in Registration Districts during the 53 Weeks of 1896.

				93	Week	cs c	01 [8]	96.											
		53	58				The	DEA	THS TO	gister	ed i	n the	53 W	eeks :	inclu	ade			
	ted On	in	in	Deat	ths of					Deat	hs f	rom .					d d	Public s.	868
REGISTRATION DISTRICTS.	Enumerated Population, 1896.	Total Birtus Weeks.	Total DEATHS Weeks.	Infants under 1 Year of Age.	Persons aged 60 Years and upwards.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-	Typhus Fever.	Enteric (or Ty- phoid Fever).	Simple Con-	Diarrhœa.	Cholera.	Violence.	Inquest Cases.	Deaths in Pul	Uncertified Causes of Death.
LONDON	4411710	135796	83511	21853	18370	9	3697	942	2683	2937	5	591	13	3223	95	3439	7568	23178	540
VEST DISTRICTS - ORTH DISTRICTS - ENTRAL DISTRICTS - AST DISTRICTS - OUTH DISTRICTS - ETROPOLITAN HOSPI- TALS AND ASPLUMS	778251 1040694 233635 716334 1642796	19919 30118 7188 26948 51623	13990 18147 5022 15536 29324	3434 4596 1249 4502 8065	3452 4180 845 3024 6358	1 - 2	670 740 191 666 1430	138 241 15 78 390	414 701 102 333 1130	400 629 120 640 1148	1 1 1 - 2	82 150 56 93 208	5 2 - 2 4	488 664 190 671 1199	12 25 2 18 38	675 320 757	1116 1631 616 2065 2128	4264 4685 1893 4512 6332	20 21 14 4 481
butside Registra- tion London																-			
z. Paddington b. Kensington Fulham Chelsea St. Geo. Hanover Sq. Westminster	124506 170465 217980 96646 133556 35098	3068 3719 7075 2651 2630 776	2100 3155 3930 1907 2371 527	502 669 1249 463 431 120	483 977 761 439 612 160	11111	105 190 173 109 50 43	7 9 109 7 4 2	42 38 236 50 45	51 103 129 63 46 8	1	15 9 31 6 20	1 2 1	64 64 216 69 62 13	2 5 2 - 1	123 94 126 57 148 22	200 229 277 131 240	569 1037 947 599 1005 107	1 4 3 5 6
NORTH DISTRICTS. MARYLEBONE	141188 75449 240764 336764 246529	4416 1462 7040 9924 7276	2493 1303 4535 5747 4069	626 187 1172 1489 1122	544 279 1031 1346 980	1 1 1 1 1	170 57 135 278 100	3 94 15 28 101	37 250 73 139 202	66 22 127 247 167	- - - 1	15 20 32 32 51	1	65 16 178 166 239	2 1 3 15 4	106 37 213 181 138	237 69 467 494 364	495 544 1444 1228 974	7 2 8 3
ENTRAL DISTRICTS. St. GILES STRAND HOLBORN LONDON CITY	38237 24916 138771 31711	1064 504 5074 546	583 817 2501 1121	146 109 850 144	144 188 332 181	1 -	39 24 122 6	2 10 3	2 7 57 36	11 9 85 15	- 1. -:	1 14 15 26	1-11, T i	17 15 142 16	- 22 -	22 53 97 148	53 89 267 207	158 523 475 737	4 8 2
EAST DISTRICTS. SHOREDITCH BETHNAL GREEN WHITECHAPEL ST. GEOIN-THE-EAST- STEPNEY MILE END OLD TOWN	122358 129162 78676 47506 58305 111060	4387 4869 3241 2098 2042 4300	2666 2717 2359 958 1211 1996	793 798 511 284 457 621	597 538 328 191 116 508	1 1 1 1 1 1	143 151 52 28 59 83	12 18 4 8 6 15	45 47 62 10 44 46	125 159 39 17 62 79	111111	11 10 32 2 2 4	1 - 1	140 112 48 55 55 96	7 1. 1 1 -	102 76 214 44 67 49	309 296 402 163 178 187	701 638 1440 226 268 340	2 - 1 - 1
POPLAR - SOUTH DISTRICTS. St. SAVIOUR SOUTH-WARK St. OLAVE SOUTHWARK LAMBETH - WANDSWORTH - CAMBERWELL	169267 206582 137585 295033 352379 253076	7279 4968 9579 10183 7662	3629 3430 3259 5369 5593 4857	1277 807 1369 1633 1198	513 573 1226 1220 1275	1	183 127 184 333 210	15 10 98 108 21	66 81 199 252 173	159 151 141 137 293 196	- 4 1	13 25 45 27 25	- 1	203 104 176 284 174	7 3 1 5 14 9	122 216 257 191 84	288 354 475 430 212	246 991 1564 872 1238	65 73 65 41 72
GBEENWICH LEWISHAM WOOLWICH	175774 105873 116494	5723 2584	3412 1434 1970 1492	891 352 538	714 434 403 531	1 - 6	199 42 152	97 3 38 80	224 38 97	127 37 66	1	49 12 12 2	1	122 67 69 11	5 - 1	114 47 74 12	181 72 116	880 222 319 1492	68 29 68

Table 19. LONDON.—Population; and Births and Deaths in Registration Sub-districts during the 53 Weeks of 1896.

				th	e 53	We	eks	of 1	896.					_				•		-
									The I	EATE	s regi	stere	d in th	ne 53	Week	s inc	lude			
		, i	ks.	Weeks.	Des	ths of	_				De	aths	from						fions.	cath.
	REGISTRATION SUB-DISTRICTS.	Founerated Population, 1896.	Total Birras in 53 Weeks	Total DRATHS in 53 Wee	Infants under 1 Year	Persons aged 66 Years	Small-pox.	Measles.	Scarlet Fever.	Diphtheria,	Whooping.cough.	Typhus Fever.	Enteric (or Typhold)	Simple Continued	Diarrhoa.	Cholera	Violence	Inquest Coape		Uncertified Causes of D
	WEST DISTRICTS.			1	Н				-								ı			
	St. Mary Paddington $\{G, \&W\}$ St. John Paddington $\{H, \&G\}$	90996 33510	2613 455	1464	428 74		-	92		28		-	8 7	1 -	56 8	2	41 82	1	1	1
	Kensington Town $Ww - W$. Brompton $H - W$. & C.	122164 48301	3103 616	2620 535	596 73		-	172		28 10	99	-	7 2	1	58 6	2	73 21	192		1 -
l	St. Peter Hammersmith - W. St. Paul Hammer- W . & G. Smith HH - W . & C. Fulham Ww - W . & C.	9097	234 2773 4068	121 1435	42 447 760	338	-	5 44 124	10 99	3 33 200	5 52 72	1	9 22	2	6 74 136	1	5 64 57	132 135	142	1 3
	Fulham Ww W. & C. Chelsea Kensal Town - C. Chelsea North WHHHHHH C. Chelsea South HH C.	113781 21450 42057 33139	652 1199 800	309 999 599	118 166 179	51		24 39 46	5 2	6 24 20	19 23 21		1 3 2	- 1	21 24 24	2	5 23 29	12 67 52	479 120	3 -
100	May Fair WH - C. Belgrave WHHH - C. St. John Westminster HH C. St. Margaret Westminster H C.	23827 56140 31492 22097	226 1181 887 336	468 1070 387 446	42 188 123 78	217 217 82 96	1111	1 32 13 4	311	31 2 12	5 15 19 7	1111	1 10 1 8	1	12 23 14 13	1111	25 89 12 22	33 123 37 47	333 422 10 240	2 3
A	St.JamesWestminster N. & G. St Anne Soho HHHHHHH N.	23050 12048	496 280	346 181	67 53	128 32	-	28 15	1	2	3 5	-	1 -		11 2	1	10 12	18	87 20	5
ı	North Districts.						П													
-	All Souls Marylebone W. Rectory Marylebone C. AW	36595	766	822	140	175	H	8	1	9	5	-	6	-	17	-	41	76	372	-
ı	St Many Manylohone	19798	506	295	69	91		20	1	3	13	ľ	1	-	7	-	17	41	52	1.
ı	HHHH	19637 32547	1507	533	168	72 85	-	78	1	10	23	-	1		10	2	12	53	66	2
I	lebone HH	32611	803	498	147	121	-	39	-	7	18	-	6	-	13	-	19	38	3	2
ı	Hampstead WwHHHHHH N.&W.	75119	1462	1303	187	279	-	57	94	250	22	-	20	-	16	1	37	69	544	2
ı	Regents Park Pancras W.	37341	1018	504	151	114	-	17	1	11	19	-	3	-	18	Ŀ	12	46	43	1
ı	Tottenham-court $wHHH$ N . N	26757	648 866	746 568	125 141	146 81		17	1	19	7	-	8	-	17 26		35 50	68 79	464 162	-
	Gray's Inn Lane HHH - N. Somers Town HH - N. Camden Town WH - N. Kentish Town WW - N.	16669	1016 606 2886	580 543 1594	205 118	97 246 347		47 17 2 35	2 2 9	11 2 23	27 5 62	-	6 - 12	-	28 19 70	3	27 39	69	101 347 327	2 1 - 4
	Islington South-west H N. 1 Islington South-east N.	07365 66549	2929 3390 1896 1709	2443 1593 886 825	533 270	650 272 169 225	1 1111	58 134 44 42	6 12 4 6	46 62 17 14	98 68 50 31	11111	17 2 3 10	- 1	50 52 38 26	12 - 2 1	45	171 153 100 70	1186 15 27	1 2 -
ı	Stamford Hill - E. West Hackney H - N. Hackney WwwHH E. & N. 1	04691	841 440 1235 3297 1463	196 662 2166	48 172 553	120 42 169 522 127		5 10 16 51 18	6 2 3 88 2	17 3 19 50 13	15 9 23 75 45	- 1	5 3 3 5 5	-	28 2 39 22 48	- 4			1 111 856 6	

Note.—The Italic letters placed against the names of the sub-districts denote Public Institutions situated therein, namely: W-Workhouse: H-Hospital; L-Lunatic Asylum; L*-Private Lunatic Asylum in which paupers are received; w-Workhouse Establishment receiving inmates from other Districts than that in which it stands. The Roman capitals signify the water Companies which supply the different Sub-districts;—G. signifies Grand Junction Company; W. West Middlesex; C. Chelsea; S. Southwark and Vauxhall; L. Lambeth; N. New River; E. East London; and K. the Kent Company.

Table 19 (continued). LONDON.—POPULATION; and BIRTHS and DEATHS in REGISTRATION SUB-DISTRICTS during the 53 Weeks of 1896.

SUB-DISTRICTS duri	B-DISTRICTS duri	IRICTS duri	duri	1.	ng	tne	_	_		_	_	in th	e 53 T	Weeks	inel	nde				-
	, n	ks.	sks.	Dea	ths of					Dea	aths f	from						ions.	Jo	
EGISTRATION UB-V ISTRICTS.	Enumerated Population, 1896.	Total Birrus in 53 Weeks.	Total Dratus in 53 Weeks.	Infants under 1 Year of Age.	Persons aged 60 Years and upwards.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus Fever.	Enteric (or Typhoid)	Simple Continued	Diarrhau.	Cholera.	Violence.	Inquest Cases.	Deaths in PublicInstitutions	Uncertified Causes Death.	The second secon
TRAL DISTRICTS.								THE RESIDENCE OF THE PERSON IN	***************************************											۱
rge Bloomsbury - N. s South WH - N. s North H - N.	16110 12976 9151	300 543 221	130 301 152	35 73 38	31 82 31	- 1 -	12 19 8		1 1	2 8 1		1 -		5 10 2		6 8 8	14 28 11	112 46		
rtin-in-the- s HH -} - N. & C. WHH - N. Union Work- , Edmonton -}	13077 11839	214 290 -	339 379 \$9	40 63 6	58 56 74		9 15 -	2 -	4 3 -	6 3 -		11 3 -		5 9 1		30 23 -	46 41 2	182 242 99	. 3 - 1	
rge-the-Martyr } N. IHHH N. Irew, Eastern wH N. Iclerkenwell N. Iclerkenwell N. Istreet N. Industreet N.	17324 13718 15777 16640 17716 16069 29897 7595 4035	445 438 505 558 578 582 1644 243 81	589 208 216 222 280 218 558 124 46 40	142 62 91 90 102 81 228 42 12	36 38 28 30 34 39 72 15 9	1 - 1	31 11 9 17 20 6 23 3 2	1 3 2 3 -	28 1 3 1 11 3 5 2 3	10 16 9 8 13 10 15 3 1	1	1 3 1 3 3 2 2	1 1 1 1 1 1 1 1	9 6 26 21 16 18 40 3 1	1	18 7 11 9 10 9 24 8 -	34 22 38 23 37 26 58 18 8	343 4 - - - - - 40	2 2 1 1 1 1 1 1	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	6870 3299 9591 9059 2892	178 62 183 90 33	100 41 828 100 32 20	25 9 99 10 1	17 11 102 26 17 8	11111	4 - 2 -	1 1 1 -	34	2 1 10 1 1	111111	1 1 22 1 1	11111	1 13 13 1 -	11111	12 4 112 19 1	18 9 147 27 6	1 711 5 20	1 - 1	
EAST DISTRICTS.	1-0	*09	014	-			10	,	0			,					,,	200		
itch South HL^* - E. & N. New Town w - N. Old Town - N. ston WH - N. & E.	17975 29575 27645 47163	503 1112 964 1808	314 689 440 1223	176	63 212 66 256	-	18 42 26 57	1 4 1 6	9 7 6 23	13 36 20 56	1111	3 3 4		12 25 27 76	2 2 2 1	15 29 17 41	55	67 219 415	1	
l Green North H · E. l Green South · E. l Green East WHL* E.	49301 34194 45667	1892 1333 1644	875 577 1265	215	104 67 367	-	65 51 35	8 4 6 .	14 15 18	74 40 45		1 5	-	43 25 44	- 1	33 17 26	122 78 96	36 - 602		
elds E. & N. nd New Town W - E. hapel Church H E. & N. an's Fields E.	26681 12816 25561 13618	1021 806 992 422	545		53 118 131 26		13 15 21 3	1 1 1 1 1	4 3 52 3	10 6 16 7		1 2 29 -		12 11 23 2	1	9 23 174 8		371 1069 -	-	
orge's North E. m,St. George East W E.	39576 7930	1787 311	621 337	231	94 97	-	22 6	8	8 2	15 2	-	1	-	45 10	1 -	34 10	133	226	-	
fe W E.	10434 14954 32917	340 474 1228	426 230 555	197 66 194	14 29 73		8 13 38	3 3	19 5 20	12 15 35	111	3 -		17 7 31		31 12 24	56 36 86	266 2 -		
nd Old Town West } E. } Ind Old Town East } E. }	† 11060	${2126}$		284	_		31 52	12	17	31 48	-	4 9		53 43	-	15 34	82 105 (12	1	
y_wwwH - E.	41687 69821 57759	1385 2595 2031	1858	237 1 461 4 340 1	137	- 1	59 43 48	3 6 6		33 65 61		2 10 9	- 1	29 78 63	1 1	32 00 £ 73 1	80 168 182	37 794 68	1 - 1	

On July 1st, part of Mile End Old Town Eastern sub-district was transferred to Mile End Old Town Western sub-district,

Table 19 (continued). LONDON.—Population; and Births and Deaths in Registration Sub-Districts during the 53 Weeks of 1896.

		B-DIST	1111013	uui	ing	the	Ų0	11 6	eks	01 1	090								
							Т	he D	EATHS	regis	tered	in th	e 53 V	Veeks	incl	ıde			
	n,	eks,	eks,	Dea	ths of					De	aths i	rom						tions.	Jo
REGISTRATION SUB-DISTRICTS.	Enumerated Population 1896.	Total Biarus in 53 Weeks,	Total DEATHS in 53 Weeks,	Infants under 1 Year of Age.	Persons aged 60 Years and upwards.	Small-pox.	Measles	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus Fever.	Enteric (or Typhoid) Fever.	Simple Continued Fever.	Diarrhea.	Cholera,	Violence.	Inquest Cases.	Deaths in Public Institutions	Uncertified Causes Death.
South Districts.							-						3						
$ \begin{array}{c cccc} \text{Christchurch} & \text{South} \\ \text{wark} & WH \\ \text{St. Saviour Southwark} & -\text{S.} \\ \text{Kent-road} & -\text{S. & L.} \\ \text{Borough-road} & WH & -\text{S. & L.} \\ \text{London-road} & WH & -\text{S. & L.} \\ \text{London-road} & HL & -\text{L. & S.} \\ \text{Trinity Newington} & -\text{S. & L.} \\ \text{St. Peter Walworth} & W & -\text{S. & L.} \\ \text{St. Mary Newington} & -\text{L. & S.} \\ \end{array} $	13064 12301 22879 16083 21316 28723 62045 30171	405 385 875 613 725 933 2212 1131	209 182 387 413 353 448 994 444	81 56 149 154 101 187 369 180	49 25 40 32 62 57 178 70	A TITLLE	1 13 41 16 19 26 47 20	1 2 6 3	2 1 10 9 6 10 17 11	8 9 16 43 17 14 34 10	11141111	2 4 5 2		9 27 16 14 30 65 30	111 + 1	15 12 10 16 8 13 33 15	27 15 29 43 36 31 70 37	13 - 172 19 - 42 -	9 9 6
St. Olave WH - S. & L. Leather Market W - S. & L. St. James Bermondsey - S. Rotherhithe WwH - S. & K.	11731 32339 53136 40379	419 1301 1902 1346	832 623 826 978	107 248 242 210	111 94 138 230	1	13 44- 25 45	2 4 4	18 13 30 20	12 34 58 37	1,1.1.1.	13 7 5	11111	20 22 29 33	1 12	122 24 28 42	161 61 57 75	634 33 - 324	15 34 11 13
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	14186 14210 18770 40994 52486 43244 81825 29318	502 945 649 1687 1886 1121 2137 652	270 241 891 1220 683 542 1233 289	114 86 169 262 232 157 280 69	37 34 91 387 175 142 283 77	11111111	13 14 26 40 32 11 33 15	- - 3 2 4 1 87	5 42 9 7 16 113 7	10 14 32 15 39 10		2 9 3 3 - 25 3	1	16 14 22 38 26 14 32 14	2 2 - 1 -	11 15 125 44 23 8 26 5	28 26 165 115 70 19 40 12	67 22 644 607 9 - 206 9	9 4 14
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	71730 93385 46953 58101 20566 61644	2500 2858 1144 1752 462 1467	1134 1807 625 787 258 982	430 507 165 249 72 210	139 441 154 189 72 225	111111	78 108 34 55 21 37	1 4 4 3 - 96	26 24 9 8 3 182	57 80 41 57 17 41	111111	5 5 6 4 4 3	1	86 81 28 43 23 23	2 1 7 - 4	48 69 16 30 10 18	121 157 35 71 18 28	507 19 29 - 317	3 6 19 4 - 9
$\begin{array}{cccc} \text{Dulwich} & \cdot & \cdot & \cdot \text{L. \& S.} \\ \text{Camberwell} & WwL^*L^* \text{S. \& L.} \\ \text{Peckham} & W & \cdot \text{S., L., \& K.} \\ \text{St. George Camberwell L. \& S.} \end{array}$	7519 90286 88242 67029	78 2487 2789 2308	55 2353 1380 1069	411	20 839 264 152	1111	69 90 51	4 11 6	46 95 32	59 76 61	1111	17 5 3	1111	51 52 71	- 1 7 1	1 32 29 22	2 75 73 62	1223 15 -	1 20 29 22
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	36152 45441 33402 23012 37767	1400 1697 766 701 1159	691 959 388 355 1019	107 113	93 105 110 86 320	- - 1 -	62 71 10 14 42	5 83 - 3 6	16 160 11 5 32	25 43 14 13 32	1	35 2 - 8	1	21 52 17 14 18	23 - 1	20 17 6 14 57	45 30 10 23 73	285 - 25 570	15 21 10 12 10
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	5911 24222 38139 37601	127 458 1078 921	75 284 612 463	143	22 107 186 119	1 1 1 1	1 11 5 25	- 2 1	3 1 26 8	5 5 8 19	1771	2 3 7	1111	1 11 37 18	1111	4 6 24 13	12 31 25	5 13 194 10	1 7 9 12
$\begin{array}{ccccc} \text{Charlton} & wHH & - & \text{K.} \\ \text{Woolwich Dockyard} & - & \text{K.} \\ \text{Woolwich Arsenal } & HHHH & \text{K.} \\ \text{Plumstead West} & H & - & \text{K.} \\ \text{Plumstead East} & WH & - & \text{K.} \\ \end{array}$	15928 19355 21959 16714 42538	407 552 736 486 1464	283 313 372 214 788	47	38 60 56 67 182		10 40 31 14 57	29 1 1 1 6	46 9 6 7 29	7 5 17 9 28	1 1 1 1 1	7 - 2 - 3	1	8 9 16 2 34	1	10 9 20 5 30	9 20 34 9 44	107 - 12 - 200	8 12 19 5 24
Banstead Asylum Caterham Asylum Cane Hill Asylum Hospital Ships and Camp, Dartford Darenth Asylum Hanwell Asylum Colney Hatch Asylum N.E. Hospital Winchmore Hill Hospital Leavesden Asylum Claybury Asylum		i rigiri i jan	170 117 144 10 88 166 213 72 13 193 301	2 - 4	54 74 59 - 19 66 78 - 86 95	6		2 - 67 11 -	1 1 2 -		111111111	1 1		1 1 1 1 3 1 (1 1 8)	1111111111	2 1 1 2 4 - 1 - 1	1 1 2 4 - 2 -	170 117 144 10 88 166 213 72 13 198 301	11111111111

BLE 20.—LONDON.—OUTER RING (excluding Deaths of Londoners in Metropolitan Workhouses, Hospitals, and Asylums).—Area; Population; Births and Deaths registered during the 53 Weeks of 1896.

gis-			n,			1100	ths of		he Dr	BATHS				e 53 W	eeks	incl	ude		
tion trict nd ub- trict im- rs.	REGISTRATION SUB-DISTRICTS.	Area in Acres.	Enumerated Population, 1891.	Вівтня.	Deaths.	Infants under 1	Persons aged 60 F	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Fever.	Diarrhœa.	Cholera.	Violence.	Inquest Cases.	Deaths in Public Institutions.	Uncertified Causes of Death.
ON	DON-OUTER RING -	368749	1422063	49358	23394	6911	5682	5	901	209	608	855	248	1073	65	737	128	1 2309	1
121 1234 12 123 12 123 1234 5 1234 5 6 1 12 1234 5 6 7 12	Carshalton wHH Epsom, part of* WwH Godstone, part of* WwH Godstone, part of* W Croydon WwHHH Mitcham w Wimbledon HHH Kingston WH Esher, part of* HH Hampton H Richmond WH Mortlake H Bromley HHH Beckenham H Chislehurst, part of* WHH Bexley HH Dartford Work, part of* Sunbury w Staines WH Hillingdon WHH Uxbridge Hayes wH Isleworth WHH Twickenham HH Brentford HHHH Chiswick Acton wH Harrow HHH Edgware HH Willesden HHH Hendon WH Hornsey HH Hornsey HH Hornsey HH Hornsey HH Hornsey HH Hotham H Barnet WHH Finchley WHH Waltham Abbey Cheshunt H Hatfield, part of* Usanting Town H Forest Gate w East Ham wH Leyton WWWwH Configed, part of* Bushey H Canning Town H Forest Gate w East Ham wH Leyton WWWwH Rollydon HHL Chigwell, part of* Hepping Work, part of* Romford, part of WH Ifford Romford, part of WH Ifford Romford, part of WH Ifford	368749 12228 10423 2754 20851 11697 3220 8071 6601 4565 2160 2823 9127 6542 14307 12540 11054 13277 6035 6172 14537 4318 1245 6132 13809 6994 4383 3382 15599 5478 4688 3039 4642 7489 12602 11017 8480 3306 9331 1100 1242 1558 806 4334 6501 11779 6556 6493	1422063 26108 12508 128699 28088 25761 144765 12059 18252 25389 16159 20372 30590	49358 634 274 59 3546 665 386 1362 377 480 606 591 1083 - 479 427 4450 391 1388 389 792 464 1068 728 1106 475 703 311 112 2786 597 1703 3529 1354 1703 215 - 1703 3529 1854 1068 2781 12526 1883 2400 382 2400 382 2410688	278 182 2031 314 347 712 30 40 5 219 30 4 237 3111 212 212 82 146 532 207 594 46 1229 334 476 69 155 5 87 4 886 1178 866 1178 866 1178 87 1163 720 1148 87 148 886 1178 1163 720 1148 886 1178 1163 720 1148 886 1178 1163 720 1148 886 1178 1163 720 1148 886 1178 1163 720 1148 886 1178 1163 720 1148 886 1178 1163 720 1148 1148 1148 1148 1148 1148 1148 114	69 34 2 2 516 89 99 90 67 65 60 73 136 - 34 47 53 16 16 12 25 88 10 10 11 12 12 13 16 16 16 17 18 18 18 18 18 18 18 18 18 18	72 80 7 607 73 97 76 126 81 126 45 81 119 57 669 49 111 19 19 58 141 126 53 9 94 126 68 86 46 75 88 88 110 16 16 18 18 18 18 18 18 18 18 18 18 18 18 18	5	901	209 7 7 2 5 1 1 5 3 3 2 2 4 4 1 1 1 1 1 1 1 1 1 1 1 1 1	608 21 - 34 - 5 318 46 66 2 77 3 1 14 - 72 5 10 8 10 1 32 4 7 1 22 7 - 1 12 5 17 27 37 27 37 37 37 37 37 37 37 37 37 37 37 37 37	855 3 1 - 68 9 6 8 6 8 6 8 6 8 6 8 7 14 - 2 2 6 9 9 31 7 35 26 9 9 31 7 35 26 14 9 3 35 26 14 1 - 1 - 1 1 - 3 3 48 41 1 1 - 1 - 1 1	248 2 20 3 4 4 4 - 3 6 1 1 - 2 2 - 1 2 2 3 2 3 - 10 - 1 2 2 3 10 20 9 8 8 1 16 113 9 8 14 22 6 6	1073 - 60 23 13 112 10 12 14 55 5 10 19 - 43 8 12 20 17 44 19 20 34 4 - 69 15 8 7 5 68 69 15 45 68 71	65	737 8 8 8 - 60 13 8 8 26 21 - 6 8 8 6 24 - 7 6 7 2 5 5 6 2 1 1 2 5 5 6 6 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1	99 100 - 1566 23 155 466 111 8 8 8 11 11 30 - 8 8 8 11 11 30 - 8 8 11 11 30 - 12 11 128 21 18 13 22 7 9 16 446 1100 27 7 17 32 31 9 - 6	1 1 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	484 -3111 1 8 - 6 1 1 1 10 12 13 3 19 - 5 8 3 1 16 3 5 5 9 4 4 13 5 5 5 5 2 11 1 2 5 5 1 16 4 3 4 4 1 5 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	Barking Town H Metropolitan Asy. Hos. London Fever Hospital Middlesex Co. Lun. Asy. London Co. Lunatic Asy.	3814	14301	532 709	195 251 31 1 99 33		50 46 - 39 13	3 -	3 - 1	3 14 1 -	6 6 12 -	8 1	57	10 18 -	1	5 10 - 2 1	7 12 - 2 1	9 31 1 99 33	11 9

The parts of sub-districts included within that portion of the Metropolitan Police District which forms the Outer gare as follows:—30:2, Epsom sub-district, except the parish of Ashtead (pop. 1351); 37:1, the parishes of Warlingham Farley in Godstone sub-district; 39:3, Esher sub-district, except the parish of Esher (pop. 2282); 41:3, Chislehurst-district, except the parishes of Chelsfield, Cudham, and Knockholt (pop. 3097); 135:1, the parish of Northaw in theild sub-district; 187:1, Chigwell sub-district; except the parish of Theydon Bois (pop. 1079); 189:1, the parish of the Cuter Ring in 42:2, Dartford; 137:3, total 187:2, Epping sub-districts.

Table 21.—LONDON.—Deaths of Persons belonging to London and its Sanitary Areas registered in the 53 Weeks of the Year 1896.

	1051	310104	in the	00 , 1	COMB	01 01								
	d to						Deat	hs fron	n					r of
SANITARY AREAS,	Population estimated the middle of 1896.	ALL CAUSES.	Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-cough.	Typhus.	Enteric Fever.	Simple Continued Fever.	Diarrhæn.	Phthisis.	Deaths under 1 year Age.
REGISTRATION LONDON	4,421,955	81721	14009	9	3392	940	2663	2931	5	564	13	3192	7567	21694
WEST LONDON	768,187 1,043,020 244,995 716,843 1,648,910	13079 17932 5315 15559 29836	2165 2937 741 2743 5423	1 1 1 1 5	630 761 207 668 1426	159 171 59 194 357	425 580 104 478 1076	386 630 126 641 1148	1 1 1 - 2	82 147 42 96 197	5 2 - 2 4	476 644 201 663 1208	1200 1673 630 1376 2688	3324 4518 1258 4490 8104
West. Paddington	124,838 170,660 104,551 115,008 96,657 80,041 53,477 22,955	1947 2914 1828 2057 1850 1108 978 397	320 459 298 419 388 112 117 52	1	103 173 62 101 110 32 18 31	22 40 -21 29 23 11 10 3	65 70 52 77 115 24 20 2	49 99 62 69 63 16 25	- 1 - - -	13 16 13 9 10 9 9	1 1 2 - 1 -	66 60 85 134 66 20 35	161 247 149 194 179 104 122 44	479 661 537 710 446 209 208 74
North. St. Marylebone	141,114 75,812 241,066 337,639 33,615 213,774	2855 916 4442 5871 434 3414	453 141 608 1043 80 612	1 -	195 58 133 275 5 95	26 7 37 57 8 36	74 30 99 255 19 103	70 22 128 247 16 147	- - - 1	20 7 31 47 5 37	1 1	68 17 180 160 27 192	280 86 474 499 28 306	624 180 1182 1489 106 937
Central. St. Giles St. Martin-in-the-Fields Strand Holborn Clerkenwell St. Luke City of London	38,158 13,003 23,820 30,932 66,195 41,478 31,409	737 214 550 736 1393 1059 626	89 30 59 101 255 161 46	1 -	41 11 28 33 53 53 35 6	7 3 6 - 15 21 7	7 3 3 12 42 26 11	14 5 8 27 42 23 7	- - 1 - -	4 3 1 5 15 4 10		16 5 13 22 88 52 5	113 26 70 102 145 123 51	156 35 110 171 408 803 75
East. Shoreditch Bethnal Green Whitechapel St. George-in-the-East Limehouse Mile End Old Town Poplar	122,265 129,151 78,886 47,589 58,347 111,226 169,379	2656 2902 1655 1187 1357 2252 3550	536 557 210 158 236 409 637	1	143 153 51 28 62 84 147	39 35 20 18 15 34 33	74 75 48 30 49 97 105	126 160 36 17 61 83 158		17 20 9 5 3 16 26	1 1	136 113 45 60 46 95 168	232 236 193 124 133 156 302	791 826 456 323 360 677 1057
St. Saviour - St. Geothe-Mar. Sthwrk. Newington - St. Olave - Bermondsey - Rotherhithe Lambeth - Battersea - Wandsworth - Camberwell Greenwich - Lee Lewisham (excl. Penge) - Woolwich - Plumstead	25,276 60,301 121,191 11,673 85,508 40,432 296,086 165,864 188,908 253,975 176,293 38,714 83,795 41,334 59,610	587 1472 2527 261 1873 834 5084 2985 2749 4602 3323 526 1216 861 936	83 260 410 57 328 157 729 614 520 928 666 74 218 165 214	1 - 2 - 2	17 77 98 11 75 43 182 179 151 206 193 14 39 72 69	5 17 29 5 20 10 65 32 29 52 51 8 7 9	18 40 71 9 73 26 139 82 40 260 140 177 75 31	19 55 66 13 97 36 140 138 158 196 127 18 28 22 35	1	1 7 18 2 11 11 24 16 21 37 32 2 2 9	1 1 1 1 1 1 1 1	23 64 127 17 52 31 175 166 121 176 120 15 60 28 33	80 165 245 26 176 90 489 242 187 398 281 50 89 88 88	168 401 788 64 513 214 1303 948 723 1193 897 121 290 221 260

In the above Table all deaths of persons in, or on the way to, Hospitals and other Public Institutions, as well as those of persons under treatment in surgical homes, or dying by accident or otherwise in the streets, have been distributed, as far as practicable, to the sanitary areas in which the deceased had previously resided. The deaths of 1,651 London residents who died outside Registration London in the Islington Union Workhouse at Edmonton, the Strand Union Workhouse at Edmonton, the Holborn Union Workhouse at Mitcham, the City of London Lunatic Asylum at Stone, and the Metropolitan Hospitals and Asylums, have been similarly distributed. In 1,790 cases the previous residence was outside Registration London, and these have been excluded from the Table.

Table 22.—LONDON.—Death-Rates of London and its Sanitary Areas during the 53 Weeks of the year 1896, after Distribution of Deaths in Public Institutions.

of the year								IVING					1000
						Deaths	from						to
SANITARY AREAS.	ALL CAUSES.	Principal Zymotic Diseases.	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping cough.	Typhus.	Enteric Fever.	Simple Continued Fever.	Diarrhos.	Phthisis.	Deaths under 1 Year Births registered.
REGISTRATION LONDON	18.2	3.11	0.00	0.82	0.21	0.29	0.65	0.00	0.13	0.00	0.71	1.68	160
WEST LONDON NORTH CENTRAL SOUTH	16.8 16.9 21.3 21.4 17.8	2·77 2·77 2·98 3·77 3·22	0.00 0.00 0.00 0.00 0.00	0.81 0.72 0.83 0.92 0.85	0·20 0·16 0·24 0·27 0·21	0°54 0°55 0°42 0°66 0°64	0.49 0.59 0.51 0.88 0.68	0.00 - 0.00 0.00 0.00	0·11 0·14 0·17 0·13 0·12	0.00 0.00 0.00	0.61 0.61 0.81 0.91 0.72	1.54 1.58 2.53 1.89 1.60	169 150 168 167 157
West. Paddington Kensington Hammersmith Fulham Chelsea St. George Hanover Square St. Marg. & St. John Westmr. St. James Westminster	15°3 16°8 17°2 17°6 18°8 13°6 18°0 17°0	2.52 2.65 2.80 3.59 3.94 1.39 2.15 2.24	0.01	0.81 1.00 0.58 0.86 1.12 0.39 0.33 1.33	0·17 0·23 0·20 0·25 0·23 0·14 0·18 0·13	0.51 0.40 0.49 0.66 1.17 0.30 0.37 0.09	0.39 0.57 0.58 0.59 0.64 0.20 0.46 0.13	0.01	0.10 0.09 0.12 0.08 0.10 0.11 0.17 0.13	0.01 0.01 0.02 - 0.01	0°52 0°35 0°80 1°15 0°67 0°25 0°64 0°43	1·27 1·42 1·40 1·66 1·82 1·28 2·24 1·89	156 178 179 175 168 149 170 149
North. St. Marylebone	19°9 11°9 18°1 17°1 12°7 15°7	3·16 1·83 2·47 3·04 2·35 2·81	0.00	1.36 0.75 0.54 0.80 0.15 0.44	0.18 0.09 0.15 0.17 0.23 0.17	0.52 0.39 0.40 0.74 0.56 0.47	0.49 0.29 0.52 0.72 0.47 0.68	0.00	0.14 0.09 0.13 0.14 0.15 0.17	0.00	0.47 0.22 0.73 0.47 0.79 0.88	1.95 1.12 1.93 1.45 0.82 1.41	141 123 168 150 126 146
Central. St. Giles St. Martin-in-the-Fields Strand Holborn Clerkenwell St. Luke City of London	19.0 16.2 22.7 23.4 20.7 25.1 19.6	2·29 2·28 2·44 3·21 3·78 3·82 1·44	0.03	1.06 0.83 1.16 1.05 0.79 0.83 0.19	0.18 0.23 0.25 - 0.22 0.50 0.22	0°18 0°23 0°12 0°38 0°62 0°62 0°34	0°36 0°38 0°33 0°86 0°62 0°55 0°22	0.03	0°10 0°28 0°04 0°16 0°22 0°09 0°31	11114	0.41 0.38 0.54 0.70 1.31 1.23 0.16	2.91 1.97 2.89 3.24 2.16 2.92 1.60	147 164 193 194 184 154 137
East. Shoreditch Bethnal Green Whitechapel St. George-in-the-East Limehouse Mile End Old Town Poplar	21·4 22·1 20·6 24·5 22·9 19·9 20·6	4·31 4·25 2·62 3·26 3·99 3·61 3·70	0.01	1.15 1.17 0.64 0.58 1.05 0.74 0.85	0·31 0·27 0·25 0·37 0·25 0·30 0·19	0.60 0.57 0.60 0.62 0.83 0.86 0.61	1.01 1.22 0.45 0.35 1.03 0.73 0.92		0°14 0°15 0°11 0°10 0°05 0°14 0°15	0.01	1.09 0.86 0.56 1.24 0.78 0.84 0.98	1.87 1.80 2.41 2.56 2.24 1.38 1.75	180 170 141 154 176 157 176
South. St. Saviour St. George-the-Martyr Sthwk. Newington St. Olave Bermondsey Rotherhithe Lambeth Battersea Wandsworth Camberwell Greenwich Lee Lee Woolwich Plumstead	22°8 24°0 20°5 22°0 21°6 20°3 16°9 17°7 14°3 17°8 18°5 13°4 14°3 20°5 15°4	3·23 4·24 3·35 4·81 3·78 3·82 2·42 3·64 2·71 3·59 1·88 2·56 3·92 3·54	0.01	0.66 1.26 0.80 0.93 0.86 1.05 0.60 1.06 0.79 0.80 0.36 0.46 1.71 1.14	0·19 0·28 0·24 0·42 0·23 0·24 0·22 0·15 0·20 0·08 0·21 0·30	0.70 0.65 0.58 0.76 0.84 0.63 0.46 0.49 0.21 1.01 0.78 0.43 0.43 0.74 0.91	0.74 0.90 0.54 1.10 1.12 0.88 0.47 0.82 0.76 0.71 0.46 0.33 0.52 0.58	0.00	0.04 0.11 0.15 0.17 0.13 0.27 0.08 0.09 0.11 0.14 0.18 0.05 0.11 0.05 0.07	0.00 0.01 - 0.01 - 0.02	0°90 1°04 1°03 1°43 0°60 0°75 0°58 0°98 0°63 0°67 0°38 0°70 0°67 0°54	3·11 2·69 1·99 2·19 2·03 2·19 1·63 1·44 0·97 1·57 1·27 1·04 2·09 1·35	213 181 184 153 160 159 136 177 150 156 157 141 136 172 133

In this Table 0.00 indicates that the deaths were too few to give a rate of 0.005; where no death occurred,—is inserted.

Note.—The rates for Registration London do not in all cases agree with those in other Tables. (See note on preceding page.)

Table 23.—Deaths in Public Institutions, registered during the 53 Weeks of 1896.

TABLE 23	Deaths in Public	In	ıstit	tutio	ns, registered duri	ng the 53	Weeks of 1	896.		
					,		DEATHS.			
						TOTAL.	Males.	1	ema	les.
TOTAL DE	EATHS IN PUBLIC INS	TITI	UTIO	NS		23178	13157		100	21
METROPOLITAN A	SPECIAL DISEASES - FALS - VAVAL HOSPITALS - FOREIGNERS -	RMA	RIES	3	$egin{array}{c} Women \ Children \end{array}$	11183 1839 7327 681 16 84 195 165	6292 906 4289 391 — 43 182 114 940		30 2	33
PUBLIC		DI	EAT	HS.	PUBLIC			D	EAT	HS.
INSTITUTIONS.	SUB-DISTRICTS.	TOTAL.	Males.	Females	INSTITUTIONS.	SUB-D	ISTRICTS.	TOTAL.	Males.	Females.
	BLISHMENTS.			-	WORKH. EST	ABLISHA	ITS.—cont.			
Kensington Workh. Kensington Infirmary Marylebone Infirmary Fulham Workhouse - Fulham Workhouse - Fulham Infirmary Chelsea Workhouse - Chelsea Hnfirmary St. George's Workh. St. George's Workh. St. George's Unfirmy. St. George's Workh. Marylebone Workh. Marylebone Workh. Marylebone Workh. Marylebone Workh. Marylebone Workh. St. Glondon Sick Asy. Pancras Workhouse Pancras Infirmary (St. John's Rd.) - Jslington W. (St.) John's Rd.) - Jslington W. (Corn- wallis Rd.) - Jslington Workhouse Sthools - Jslington Workhouse Hackney Workhouse Hackney Infirmary City of London Workh. Bethnal Green Over- flow Workhouse Strand Workhouse Strand Workhouse Marylebone Workh. Holborn Workhouse Marylebone Workh Holborn Workhouse Shoreditch Unfirmary Bethnal Green Workh Holborn Workhouse Shoreditch Unfirmary Bethnal Green Workh	2; 3. Fulham 3; 2. Chelsea, North 3; 2. Chelsea, North 4; 1. Mayfair 4; 1. Mayfair 4; 2. Belgrave 5; 1. St. James, Westm. 6; 2. Rectory, Mrylon. 7; 1. Hampstead 8; 2. Tottenham Court 8; 5. Camden Town 8; 6. Kentish Town 9; 1. Upper Holloway 10; 4. Hackney 13; 2. St. Andrew 14; 3. St. Sepulchre 15; 4. Haggerston 16; 3. Bethnal Green E. 17; 2. Mile End N. Twn. 18; 2. St. Lobn 18; 2. St. Lobn 18; 2. St. Lobn	454 28 30 235 2 331 3 69 52 53 165 307 327 42 587 6 3 	5 1 230 3 216 6 6 - 68 12 56 2 16 2 113 2 175 266	144 82 4 225 207 12 212 142 1 18 2 142 1 5 25 7 247 1 2 - 1444 9 193 13 - 40 43 1 1 24 3 106 2 149 1103 2	North Street Infirmy St. Saviour's Workh, St. Saviour's Workh, St. Olave's Infirmary Lambeth W. (Renfrew Rd.) Lambeth Workh, (Princes Rd.) Lambeth Infirmary (Brook St.) Lambeth Old & New Workh, Schools Wandsworth Infirmy Westminster Industrial School Wandsworth Workh St. Anne's Home (Pancras W.)	e 20; 2. Mile 21; 2. Bro 21; 2. Bro 21; 3. Pop 21; 3. Pop 22; 1. Chr 22; 1. Chr 23; 1. St. (24; 4. Lam 21; 2. Wes 24; 4. Lam 22; 7. St. P 23; 2. Wes 24; 4. Lam 24; 4. Lam 25; 6. Stre 26; 2. Cam 26; 3. Peck 27; 5. Gree 27; 5. Gree 28; 1. Buth 28; 3. Lewi 29; 28; 3. Lewi 29; 28; 3. Lewi 20; 2. Streel 28; 3. Lewi 28; 3. Lewi 29; 20; 2. Mile 20; 2. Mile 20; 21; 22; 22; 23; 24; 25; 24; 25; 24; 26; 25; 24; 26; 26; 26; 26; 26; 26; 26; 26; 26; 26	e End O. T. E. e End O. T. End O. T. e End O. T. E. e End O. T. End O. T. e End O. T. E. e End O. T. E. e End O. T. E. e End O	225 - 39 61 94 588 - 68 - 13 17	2 2 107 - 114 67 346 - 18 204 12 - 323 22 70 - 10 36 - 63 213 369 7 - 55 179 2 1 113	- 1 118 47 27 242 28 22 - 8 21 17 15 118 15 - 257 3 212 8 3 - 65 161 245 8 - 7 53 127 - 7 17

Note.—Institutions except Workhouse Establishments in which no death occurred during the year are not shown in the Table. The Workhouse Establishments printed in *italics* receive inmates from other Districts than those in which they are situated.

Table 23.—Deaths in Public Institutions, registered during the 53 Weeks of 1896—continued.

		DE	ATI	IS.			DE	ATI	IS.
PUBLIC INSTITUTIONS.	SUB-DISTRICTS.	TOTAL.	Males.	Females.	PUBLIC SUB-	DISTRICTS.	TOTAL.	Males.	Females.
	AN ASYLUMS				GENERAL HOSPITA	LS—continued.			
	idents only.)				Grt. Northern Central 9; 1. U	Jpper Holloway	174	95	79
Western	2; 3. Fulham	304	156	148	Mildmay Memorial - 9; 4. I	Highbury	23	12	11
North-Western	7; 1. Hampstead -	357	150	207	Invalid Home - 9; 4. I	Highbury	4	-	4
Eastern	10; 4. Hackney	234	131	103	Invalid Asylum - 10; 1. 8	Stoke Newington	, 1	-	1
South Wharf Shelter	23; 4. Rotherhithe -	2	2	-	Metropolitan Free - 10; 3. 1	West Hackney -	111	69	42
South-Western	24; 7. Brixton	206	105	101	Salvation Army Res- 10; 4. I	Hackney -	66	31	38
Fountain Hospital -		281	130	151	Jawish Home for In-	South Hackney	6	3	
South-Eastern{	27; 2. Deptford Cen-	285	151	134	(10.7.6	st. Martin-in-	100		
The Brook Hospital -	29; 1. Charlton	75	36	39	, , , , , , , , , , , , , , , , , , ,	the-Fields -5	182	125	57
Hospital Ships	42; 2. Dartford	6	2	4	King's College - 12; 2. 8 London Homœopa- 13; 1. 8		209	119	90
Hospital Camp	42; 2. Dartford	4	2	2.	thic3	Martyr5	71	29	45
North-Eastern Hos-	129: 2. Tottenham	72	36	[36]	St. John and St. Eli-	Martyr }	24	-	2/
	and the second				For Children \ 13; 1. 8	St. George-the-	198	99	99
Northern	129; 3. Edmonton	13	5	8	City Police - 14; 1. 8	St. Botolph -	1	1	-
CENTED AT	TOCTION AT C				St. Bartholomew's - 14; 3. 8	St. Sepulchre -	706	440	260
CPEIN EIRIAL	HOSPITALS.				Convent 15; 1. 8	Shoreditch South	8	3	
For Children{	1a; 1. St. Mary, Pad- dington }	48	29	19	North-Eastern (Chil-) 15; 4. I	Haggerston	87	43	4
St. Mary's {	1a; 2. St. John, Pad- } dington }	332	210	122	Mildmay Medical) 16: 1. I	Bethnal Green	36	17	19
Queen's Jubilee	1b; 2. Brompton;	5	5		Mission • • • 5	North 5 Whitechapel			
West London $ $	2; 2. St. Paul, Ham- mersmith -}	142	71	71	Zondon	Church}	1069	667	403
St. Camillo's	3; 2. Chelsea, North -	3	3		East London (Chil-) 19; 1. 8	Shadwell	266	137	129
Vietoria (Children) -	3; 3. Chelsea, South -	111	63	48	Poplar 21; 2. I	Bromley	56	47	Ş
Cheyne (Children) -	3; 3. Chelsea, South -	9	3	6	Evelina (Children) - 22; 4.]	Borough Road -	155	77	78
St. George's	4; 2. Belgrave • •	384	244	140	Guy's 23; 1. 8	st. Olave	604	392	212
Belgrave (Children) -	4; 2. Belgrave	35	16	19	$\left\{ egin{array}{ll} ext{RoyalInfirmary}(Wo-) \ men\ and\ Children) \end{array} ight\} 24$; 1. V	Waterloo Rd. 1st	67	37	30
Westminster $-$ - $\{$	4; 4. St. Margaret, Westminster-	240	139	101	St. Thomas's - : \{ 24; 3. I	Church 1st -	644	392	252
Middlesex{	6; 1. All Souls, Mary-	364	201	163	British Home for 24; 8. 1	Norwood	4	1	5
Samaritan Free {	6; 3. St. Mary, Mary-	23	-	23	Bolingbroke House 2 95. 9	West Battersea -	22	12	10
For Incurables	lebone 5 6; 4. Christchurch -	2	_	2	Alospitai	Clapham = -	19	8	11
Home for Incurable Children }	6; 5. St. John	1	1		Royal, for Incurables 25; 4. V		9	2	, A.
St. Peter's Home,				ж.о.	Cottage Home 25; 4. V		1		,
Kilburn 5	7; 1. Hampsfead	13	_	13		reenwich West	25	18	-
Home Hospital Friedenheim, for In-	7; 1. Hampstead	16	7	9	Cottage Hospital - 28; 1. H		3	3	
curables 5	7; 1. Hampstead	80	42	38	St. John's 28; 2. I		13		
St. Luke's House	8; 1. Regent's Park -	36	16	20	Board of Works) so			7	6
University College	; 2. Tottenham Court		164	119	Home for Siele Chil		6	2	4
Home Hospital	8; 2. Tottenham Court	16	9	7	archi- ,,	ydenham	10	7	3
Royal Free -	8; 3, Gray's Inn Lane	155	96	59	C 90 . 9 T	harlton	8	4	4
Temperance • •	8; 4. Somers Town	94	43	51		Voolwich Ar-	6	3	3
North-West London -	8; 5. Camden Town -	40	25	15	Shrewsbury House - 29; 5. P	Immatand Foot	1		7

Table 23.—Deaths in Public Institutions, registered during the 53 Weeks of 1896-continued.

PUBLIC OUR PROPERTY DESCRIPTION OF THE PUBLIC	T	EAT	не
PUBLIC SUD-DISTRICTS PUBLIC SUP DISTRICTS	D	and A	1
INSTITUTIONS. SUD-DISTRICTS. THE SUB-DISTRICTS. SUB-DISTRICTS.	TOTAL.	Males.	Formalos
HOSPITALS FOR SPECIAL LYING-IN HOSPITALS-cont.			
DISEASES. City of London 13; 7. City Road:			
Lock Hospital - { 1a; 1. St. Mary, Pad- } 2 - 2 East End Mothers' 20, 1. Wile End Old	9	4	
Unsumption and 1b; 2. Brompton 108 60 48 Home			
Cancer 3; 2. Chelsea, North - 104 42 62 Women Children	10	5	
For Women - 3; 2. Chelsea, North - 8 - 8 General (York Road) 24; 2. Waterloo Rd.,			
Grosvenor (Women 4; 3. St. John, West- 1	20	11	
Diseases of Throat - { 5; 1. St. James, } Use the state of the state o			
For Women - 5; 2. St. Anne, Soho - 12 - 12 Children -	9	5	4
Heart Diseases - 5; 2. St. Anne, Soho - 8 4 4 MILITARY AND NAVAL			
West End Hospital 6; 1. All Souls, Mary. 3 1 2 HOSPITALS. (Paralysis) 5 lebone 5 Station Hospitals 5 4; 3. St. John, West-)			
Orthoppedie \ \ 6; 1. All Souls, Mary-\ 5 2 3 Station Hospitals - \ minster \	9	9	
Home for Consump-) 6; 3. St. Mary, Mary-) 9 Seamen's 27; 5. Greenwich, East Herbert 29; 1. Charlton	156 24	146 23	10
sumption, Females lebone Garrison, Female - {29; 3. Woolwich Ar-}	2	_	
lebone } Arganal Information (29; 3. Woolwich Ar-)	A	4	
North London Con- 7; 1. Hampstead - 25 14 11	-	. 3	
St. Saviour's (Cancer) 8; 1. Regent's Park - 7 - 7 HOSPITALS FOR FOREIGNERS.		-	
Central London 8; 3. Gray's Inn Lane 6 4 2 German - 10; 4. Hackney - French - 11: 3. St. Giles, North	116 46	78 34	38
Ophthalmic Hosp. 8; 3. Gray's Inn Lane 1 - 1 Italian (13; 1. St. George the)	3	2	
For Women 8; 4. Somers Town - 7 1 6	3	Z	7
London Fevert { 9; 2. Islington, South-West -} 15 9 6 LUNATIC ASYLUMS.*			ı
St. Peter's (Stone, &c.) 12; 2. Strand - 11 11 - St. Luke's Hospital - 13; 7. City Road - Hoxton House* - 15; 1. Shoreditch South	14	5	9
National (Par. & 13; 1. St. George the Epilep.) 42 22 20 Hoxton House* - 15; 1. Shoreditch, South Bethnal House* - [16; 3. Bethnal Green,]	59	32	27
Alexandra (Hip) 13; 1. St. George the) 5 4 1 Grove Hells - 11 1 Row	29 37	18	11
Diseases) - 1) Martyr - 1) City Orthogodic (13; 2 St. Andrew.) 1 1 Bethlehem Hospital - 22; 5. London Road -	19	11	8
Eastern) Middlesex County 25; 4. Wandsworth	6	3	3
Peckham House* - 26: 2. Camberwell	63	29	34
Royal, for Diseases of Chest 13; 7. City Road - 64 51 13 Camberwell House* - 26; 2. Camberwell - London County Avy 2 as 7 Camber well -	44	18	26
Royal London Oph- 14; 5. Broad Street - 5 3 2 London County Asy- 30; 1. Carshalton - lum, Bansteadt Asy- 27, 1. Codetons	170	95	75
City of London for 16; 3. Bethnal Green, 1999 co 10 lum, Caterham 3 37; 1. Goustone	117	74	43
Chest Diseases -) East) London County Asy- 38; 1. Croydon	144	85	59
LYING-IN HOSPITALS. Metropolitan Asy- \ \ \lambda 42; 2. Dartford \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	88	41	47
St. John the Divine - 3; 2. Chelsea, N.: City of London Asy-	20	13	7
Women this country Asy 125; 3. Hayes Children 2 - 1 London Country Asy 125; 3. Hayes	166	- 88	78
Queen Charlotte's • 6; 3. St. Mary, Mary.		122	91
Women - 10 - 10 lum,Colney Hatch 123; 6. Finciney - 10 Children - 31 17 14 Metropolitan Asy-) 127, 9 Westerd - 1			
British - 11; 2. St. Giles, South: lum, Leavesdent - 13; 2. Wattoru	198	108	90
Women 1 - 1 Metropolitan Asy ls9; 2. Ilford	301	169	132

^{*} LUNATIC ASYLUMS.—Private Lunatic Asylums are excluded from this list, except those in which pauper lunatics are received, which are marked thus *.
† The figures here shown for these Institutions relate to London residents only.

ABLE 24.—Temperature at Greenwich; Population; Total Deaths, and Deaths at Seven groups of Ages, in London, in each Week of 1896.

						1					1	
DF	ULATION estimat	ATION estimated to the middle of 1896			4,421,955	114,285	412,374	1,351,659	1,497,655	762,712	265,052	18,218
	WEEK	TI	MPERATUI	RE.			A	GES AT	DEATH.			
WOO II	ENDING	Mean.	Highest Reading.	Lowest Reading.	ALL AGES.	Under 1 Year.	1-5	5-20	20-40	40-60	60-80	80 and up- wards.
	YEAR (of 53 Weeks) }	50.1	91.1	24.3	88,511	21,853	13,746	5,142	9,867	14,534	15,113	3,256
-	First Quarter (13 Weeks).	42.2	67.7	24.3	21,619	4,773	4,257	1,319	2,486	3,734	4,097	953
	Second (13 Weeks).	55.6	86.7	33*2	19,696	4,609	4,037	1,225	2,311	3,465	3,397	652
	Third (13 Weeks).	60.4	91'1	40.3	20,729	7,447	2,828	1,256	2,245	3,225	3,077	651
	Fourth (14 Weeks).	42.4	65.0	26.2	21,467	5,024	2,624	1,342	2,825	4,110	4,542	1,000
	1896. January 4 " 11 " 18 " 18 " 25 February 1 " 22 " 29 March 7 " 14 " 21 " 28	45°8 37°2 43°0 39°5 40°0 39°2 40°8 37°6 43°9 46°4 45°4 49°1	54'8 44'8 52'9 51'0 49'1 54'1 56'2 55'5 54'1 53'8 59'1 56'8'	38°1 32°2 34°6 28°3 30°2 29°4 35°1 31°0 24°3 34°9 33°9 32°1 35°3	1707 1540 1624 1582 1516 1762 1727 1705 1729 1846 1752 1603 1526	352 316 367 344 359 404 374 383 386 409 582 327 370	284 294 310 302 269 349 299 344 363 375 381 359 328	123 91 110 107 88 112 103 87 85 104 126 96 87	207 155 192 177 181 198 211 173 209 219 187 186	338 276 256 291 275 291 281 303 297 321 270 290 245	834 284 273 342 372 321 349 337 293 284 255	69 73 71 77 71 66 87 76 91 81 60 55
A CONTRACTOR OF THE PARTY OF TH	April 4 11 11 18 18 18 25 May 2 16 16 23 30 June 6 31 32 20 37 30 30 30 30 30 30 30 30 3	42°2 51°2 45°8 49°0 50°6 52°3 58°5 55°5 463°3 62°4 66°0 61°4	52.6 65.1 59.1 69.0 67.6 78.1 78.4 77.7 81.2 86.7 78.7	33·2 41·4 36·0 33·7 35·9 35·8 43·9 40·3 40·3 50·5 46·8	1522 1727 1683 1641 1570 1523 1516 1509 1430 1467 1397 1371	358 417 391 332 341 350 322 330 324 344 310 359 431	328 367 371 419 360 314 321 308 274 282 249 229 215	99 114 96 81 78 103 97 99 106 85 96 88 88	171 176 197 185 176 172 198 193 161 189 169 159 165	270 298 254 285 288 266 269 260 273 286 259 232 225	233 302 304 277 276 261 268 263 255 222 269 258 209	63 53 40 62 51 57 41 56 37 59 45 46 42
	July 4 " 11 " 18 " 25 August 1 " 8 " 15 " 22 September 5 " 12 " 19 " 26	61°3 68°3 64°9 67°5 62°4 58°4 60°8 59°0 58°1 58°7 58°7 58°2 52°9	77.5 87.3 91.1 90.3 76.4 70.7 76.2 73.6 74.7 71.5 70.6 68.5 67.1	48.5 51.6 50.2 48.5 47.3 48.3 49.9 47.1 45.7 50.2 50.1 45.8 40.3	1552 1770 1891 2146 2058 1790 1666 1426 1369 1368 1251 1238 1264	508 663 827 1024 937 750 599 447 895 345 316 317 319	243 243 263 290 301 242 218 196 175 177 177 144 159	97 116 113 92 106 85 107 89 89 78 86 100 98	181 189 165 190 177 179 153 155 165 180 181 160 170	231 262 232 270 221 278 270 268 239 251 237 232 234	242 229 226 236 256 210 265 223 253 253 235 213 232 237	50 58 55 44 60 46 54 48 53 42 41 53 47
	October 3 " 10 " 24 " 34 " 31 November 7 " 14 " 28 December 5 " 12 " 19 " 19 January 2	53 · 2 52 · 4 46 · 9 42 · 1 41 · 6 40 · 0 42 · 1 42 · 7 59 · 3 84 · 8 84 · 6 37 · 7 42 · 1	65°0 63°4 60°9 52°0 51°1 48°3 50°9 49°4 48°8 51°3 43°9 51°5 51°3	41.6 42.8 37.0 33.9 31.5 27.4 30.8 33.4 31.8 26.5 33.6 26.9 29.1 27.2	1276 1378 1333 1450 1709 1713 1675 1688 1596 1604 1539 1459 1279 1768	307 337 341 366 419 457 405 386 379 330 323 289 274 411	176 186 186 194 209 206 203 195 179 207 173 179 214	103 88 83 99 103 103 86 98 107 109 94 92 89 88	183 190 165 188 236 298 192 209 210 214 216 212 170 232	243 250 247 265 332 317 331 341 286 309 306 284 261 338	217 278 243 275 342 365 372 363 361 356 314 324 304 398	47 49 68 63 68 57 86 96 74 79 83 79 64 87

TABLE 25.—LONDON.—Weekly Deaths from the principal ZYMOTIC DISEASES during the Fifty Y

															Zilley Z
	S	SMALI	L-POX			MEASLES.			sc	ARLET	r FEVI	ER.	1	DIPHT	HERIA.
_	1893	1894	1895	1896	1893	1894	1895	1896	1893	1894	1895	1896	1893	1894	1895
YEAR -	206	89	55	9	1661	3293	2633	3697	1596	962	829	942	3265	2670	2316
March Quar.	33 100	7 34	10	· 5	317 439	787 1747	300	1384	335	274 285	141 166	264 197	639 677	725 651	426
Sept. " Dec. "	49 19	43 5	31 11	1 -	459 446	459 300	753 1015	497	458 467	228 175	253 269	218 263	860 1089.	641 653	602 842
Week. 1	2 1 - 5 1 - 4 5 6 3 6 5	1 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	1 2 3 1 1 1	3 2 2	44 40 39 26 12 15 15 20 20 21 14 30	60 65 45 35 21 42 40 59 47 66 74 96 137	34 30 35 21 13 17 27 26 20 23 12 19 23	91 89 102 86 50 76 91 119 128 152 137 129 134	32 35 26 35 30 19 26 19 21 15 30 17	34 26 25 9 23 22 24 19 20 17 19 13 23	14 12 9 7 11 15 18 10 7 6 4 15 13	28 22 25 26 19 19 23 13 20 15 21	477 611 377 538 438 62 600 511 377 38 65 49	66 55 48 52 72 55 58 42 59 53 53 55 57	50 34 31 29 45 34 27 29 31 34 27 24 31
14	2 3 9 6 11 13 4 16 9 7 6 11 3	3 4 3 7 4 3 5	1 1 1	2 1	23 24 44 34 26 20 32 35 29 38 45 48	132 112 125 131 125 152 176 165 148 169 122 99	18 25 39 26 39 34 39 32 50 36 72 71 84	128 158 145 170 152 138 111 120 98 115 111 107 79	19 18 24 28 21 15 26 29 27 24 38 29 38	20 29 29 25 30 25 20 20 14 17 19 18	11 15 9 13 11 13 10 17 17 12 11	27 10 11 13 10 11 16 12 19 13 22 18 15	38 44 47 50 54 68 51 41 51 39 62 68 64	63 50 53 62 58 55 56 41 36 34 43 44	23 27 30 27 29 38 41 37 41 33 45 37
27 28 29 30 31 33 34 35 36 37 - 38 39 39	9 4 10 8 3 2 3 3 2 - 1 2 2	1 1 1 5 10 4 2 7 6 3	3 1 1 1 1 3 1 6 4 5 5 2 2 2 2	1	52 56 53 36 42 43 55 30 81 23 18 6	88 57 57 53 50 33 34 27 18 13 9	73 75 82 94 67 70 62 55 56 40 28 24 27	81 62 52 58 59 42 45 28 19 24 12 7	35 34 36 36 44 26 48 33 30 36 25 34 41	17 16 24 29 18 19 14 17 13 13 15	12 20 23 14 24 15 21 27 21 20 19 13 24	15 11 20 17 24 15 23 15 16 16 18 11	54 52 66 72 64 63 63 56 56 65 88 96	43 45 36 52 57 62 57 43 33 39 55 52 67	53 50 39 48 57 55 50 24 40 38 55 37 56
40 41 42 44 45 46 47 48 49 50 51 52 53	1 2 2 1 2 1 3 4 2 1	1 1 1 1 1 1 1 1 1	1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		18 22 20 16 33 42 48 81 39 34 45 49 49	0 10 8 24 15 13 22 21 29 36 32 35 46	15 34 42 48 75 97 77 103 100 105 96 126 97	7 14 9 10 12 19 12 11 19 17 16 15 9 14	39 34 40 33 43 47 37 42 34 80 29 32 27	9 12 18 17 10 9 8 14 19 18 13 14 14	22 25 23 19 23 19 24 27 17 19 25 17	27 24 16 15 11 18 21 20 19 26 16 19 12	74 86 84 83 83 103 91 90 74 89 85 63 79	66 54 61 49 54 42 44 48 54 57 53 36 36	44 56 76 61 72 75 61 69 63 69 63 71

1893-1896; and the AVERAGE WEEKLY Numbers from these DISEASES during the 1895.

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OPIN	G-CO1	UGH.		FEV	ER.			DIAR	RHŒ	۱.				LY A'						7
1894	1895	1896	1893	1894	1895	1896	1893	1894	1895	1896	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping-	Fever.	Diarrhoea.		_	100
2097	1483	2937	719	653	629	609	3446	1780	3600	3223	16	36	40	* 17	48	33	55	YE	AR.	
934	511	979	105	145	135	142	206	171	166	129	19	33	33	16	67	33	14	Ma	rch Qr.	200
609	448	1188	122	131	81	85	757	140	316	269	20	43	29	15	57	29	21	Jur	le ",	9
349	261	504	219	111	159	169	2186	1215	2655	2624	12	29	42	17	33	33	159	Sep	t. "	1
205	263	266	273	266	254	213	297	254	463	201	12	38	58	21	35	39	26	Dec	. 93	ı
81 107 93 87 69 54 61 74 72 59 55 49 73	23 35 21 27 30 29 48 42 53 55 56 43 49	39 40 59 64 64 99 72 89 67 85 110 102 89	11 10 8 4 10 4 7 9 12 11 5 7	10 16 16 12 14 6 8 5 13 10 14 9	17 16 20 17 9 13 10 4 7 9	14 14 13 17 12 8 10 17 8 8 10 5 6	13 8 15 21 14 16 14 21 17 20 18 20 9	9 12 16 15 14 17 16 16 14 13 10 12	14 15 16 10 12 12 10 12 11 16 10 14 14	14 6 11 7 14 16 6 7 15 9 10 7	17 18 20 19 20 20 19 19 19 19 17 17	46 43 37 31 27 25 24 29 28 31 33 84 37	43 42 41 36 34 33 31 32 30 29 26 26 28	18 16 15 16 18 17 17 15 15 14 16 15 15	60 62 65 70 71 70 68 67 65 66 67 69 73	36 35 34 33 32 33 31 29 32 33 30 32	13 15 14 14 15 15 14 15 15 14 14 14 14 13		Week. 1 2 3 4 5 6 7 8 9 10 11 12 13	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
64 54 48 77 59 53 46 50 43 36 34 20	44 49 51 44 36 35 31 39 30 22 20 18 29	99 116 117 134 114 96 83 94 83 86 58 48 60	6 8 7 9 13 7 5 9 8 8 8 16 18	7 9 9 9 8 9 9 15 13 11 10 12	6355598959557	6 4 7 6 10 5 8 4 8 7 4 10 6	14 15 14 8 21 29 25 30 28 70 96 188 219	7 14 9 8 11 14 15 11 10 9 5 12 15	15 18 7 13 18 19 18 14 16 19 21 46 92	13 16 3 12 10 11 14 10 17 20 47 89	19 20 22 20 21 20 22 22 22 20 19 19 19 18	39 40 42 43 43 43 44 44 46 46 46 45 41	26 26 28 26 29 28 27 30 30 31 29 31	15 16 14 16 15 15 15 15 15 16 16 16	68 69 67 64 62 61 58 57 53 48 45 44 43	30 30 31 30 30 27 30 29 29 28 29 28 29	13 13 14 14 15 13 15 15 17 21 27 40 57		14 15 16 17 18 19 20 21 22 23 24 25 26	A STATE OF THE STATE OF
28 29 43 35 26 35 30 22 26 15 20 25	25 19 28 22 17 20 10 21 22 17 14 21 25	60 54 60 50 47 41 37 24 26 31 31 16 27	13 16 9 15 24 15 30 20 14 15 11 23 14	3 7 8 6 6 11 6 11 8 14 10 8 13	5 11 6 9 13 9 15 10 11 21 16 22 11	11 7 4 10 13 10 18 10 13 14 14 14 24 21	219 264 272 190 162 135 153 190 172 129 118 95 87	35 94 140 122 126 164 124 114 71 79 62 49 35	169 270 373 397 373 224 163 112 122 129 107 109 107	128 208 343 503 441 328 217 147 92 69 61 54 33	16 14 14 13 12 11 11 11 10 10 10 8	41 38 38 37 35 32 30 27 24 20 18 18	33 35 36 38 38 39 40 43 43 47 48 49 58	16 16 16 17 17 17 16 16 16 16 18 20 21	41 41 39 35 34 30 30 30 29 28 27 25	29 30 30 31 29 31 32 32 34 35 36 38 37	93 149 202 239 230 211 196 176 155 135 110 90 75		27 28 29 30 31 32 33 34 35 36 37 38	
7 13 10 18 14 10 8 11 26 23 25 26 14	14 10 15 20 11 14 21 20 19 30 24 33 32	9 19 15 14 19 8 21 21 17 18 25 20 14 46	10. 21 19 19 19 18 17 21 26 25 34 21 24 18	13 20 17 14 17 25 21 23 18 17 24 25 32	22 22 20 20 20 17 24 23 13 21 17 21 11 23	13 18 18 10 27 15 17 18 17 9 14 15 9 13	52 40 44 27 23 7 22 15 11 11 23 15 7	33 30 26 19 20 16 23 15 25 14 11 15 7	102 87 62 45 36 20 25 22 14 9 6 20 15	39 29 14 14 13 13 7 11 13 7 11 19 6 15	9 10 9 10 10 12 13 12 14 15 16 16 16	20 23 26 28 33 37 39 43 47 47 48 52 50	60 61 62 64 64 61 61 61 58 54 54 47 45	21 21 23 20 19 22 21 23 21 23 22 20 21	25 24 25 26 28 29 33 35 38 43 46 50 55	38 39 40 40 40 39 41 40 40 40 37 35	59 49 39 30 26 21 20 17 16 16 15 14		40 41 42 44 45 46 47 48 49 50 51 52 53	The same
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Table 26.—Births and Deaths Registered in London, and Meteorology at Greenwich, in each Week of 1896.

							V	Teek of	1896.						
NY.			Births		Т	EATHS.		Mean	Mean	of the	Degree	F-11	Amount of	Sun	Regi
No. of Week.	Week ending	Total.	i	Femls.		Males.		Tem- pera- ture of the Air.	Highest Readings of the Thermo- meter.	Lowest Readings of the Thermo- meter.	Humidity (complete saturation = 100).	Fall of Rain in Inches.	Horizontal Movement of the Air in each Week.	above Horizon in Hours.	Regi tere Sunsh in Hou
	1896.					1				meter.	i		Miles.		
1	Jan. 4	2735	1425	1310	1707	899	808	45.8	48.8	41.7	94	0.36	1632	55.0	0-1
2	,, 11	2454	1218	1236	1540	767	773	37°2	39.6	34.2	88	0.06	1782	56.2	1"
3	,, 18	2491	1310	1181	1624	820	804	43.0	47.4	38*4	85	0.18	2778	57.9	1'
4 5	,, 25	2452	1228	1224	1582	808	774	39.2	44.1	34.1	89	0.26	1408	60.0	7:
6	Feb. 1	2461 2656	1262 1370	1199 1286	1516 1762	759 936	757 826	40°0 39°2	44.3	35°7 33°4	90 88	0.00	1078 1558	62·5 65·3	3.
7	,, 15	2575	1336	1239	1702	869	858	43.9	50.1	38.2	85	0.14	1761	68.3	13*
8	,, 22	2497	1345	1152	1705	858	847	40.8	45.7	36.3	88	0.16	1340	71.4	14
9	,, 29	2628	1343	1285	1729	868	861	37.6	42.9	32*3	77	0.06	2001	74.6	19*
10	March 7	2534	1241	1293	1846	948	898	43.9	50°1	38.3	81	1.01	3703	77.3	51
11	,, 14	2806	1435	1371	1752	898	854	4614	53.4	40.7	83	0 38	2042	80.5	3*
12	,, 21	2483	1258	1225	1603	825	778	45°4	52.7	39.0	86	1.16	2742	83.8	4'
13	,, 28	2780	1401	1379	1526	778	748	49.1	58*0	42.6	77	0.40	2280	87.0	281
14	April 4	2629	1322	1307	1522	767	755	42.2	49.5	35.9	81	0.50	1954	90.3	12:4
15	,, 11	2682	1414	1268	1727	888	839	51.2	57.9	45.8	- 76	0.12	1790	93.6	5.8
16	,, 18	2836	1430	1406	1653	900	753	45°8	53.6	38.9	75	0.25	2098	96*6	16.
17 18	,, 25 May 2	2743 2565	1374	1369	1641	831	810	49.0	59.9	38.6	75	0.00	1356	99.7	20.4
19		2690	1376	1243	1570 1523	815	755 707	50°6 52°3	63.9	42·6 41·5	68 65	0.00	2849 1913	102.6 . 105.4	22°1
20	,, 16	2462	1287	1175	1516	812	704	58*5	71.9	45.9	. 65	0.00	1578	108.0	57 9
21	,, 23	2421	1228	1193	1509	810	699	55*5	-65*2	47.5	72	0.25	1634	110.4	15.4
22	,, 30	2326	1207	1119	1430	671	759	55.4	66.4	45.8	67	0.00	2298	112.5	44.0
23	June 6	2545	1307	1238	1467	723	744	63.3	77.5	50.0	61	0.19	1171	114.1	61.8
24	,, 13	2482	1290	1192	1397	745	652	62.4	72.6	54.3	76	1.45	1590	115.2	38.7
25	,, 20	2511	1281	1230	1371	694	677	66°0	78.1	55.8	69	0.04	1795	115.9	60*8
26	,, 27	2501	1283	1218	1370	698	672	61.4	73.0	52.0	70	0.19	1499	116.0	26.6
27	July 4	2446	1279	1167	1552	783	769	61.3	71.9	53.6	70	0.24	2541	115.3	29.7
28	,, 11	2634	1353	1281	1770	912	858	68*3	82.0	56.3	60	0.03	1459	114.2	66°
29	" 18	2429	1203	1226	1891	999	892	.64*9	77.4	53°8	66	0.51	1700	112.7	39*5
30	,, 25	2418	1236	1212	2146	1136	1010	67.5	80.6	56°3	59	0.00	1661	110.8	35.4
31 32	August 1	2623 2291	1343 1145	1280	2058	1103	955	62.4	73.8	53.0	68	0.65	1336	108.6	39.8
33	44	2624	1324	1146 1300	1790 1666	972 880	818 786	58°4 60°8	67·9 70·4	50°7 53°8	72 77	0.36	1376 1904	105.9	14.2
34	,, 22	2498	1254	1244	1426	720	706	59.0	69.3	51.2	78	0.28	1290	103.5	23.2
35	,, 29	2651	1346	1305	1369	746	623	58.1	68.5	51.2	78	0.24	1894	97.2	18.3
36	Sept. 5	2449	1281	1168	1308	685	623	58.7	66*4	53.6	85	1.22	1236	94.1	10.4
37	,, 12	2440	1217	1223	1251	683	568	59°7	66*2	54.8	90	1.58	1500	90.9	7.8
38	,, 19	2537	1308	1229	1238	621	617	58°2	66.0	52.8	83	1.22	2398	87.8	20.8
39	,, 26	2316	1200	1116	1264	637	627	52.9	61.2	47.1	81	1.40	3028	84.6	20.1
40	Oct. 3	2844	1473	1871	1276	646	630	53.2	60.8	46°5	. 86	0.15	1508	81.3	16.8
41	,, 10	2536	1344	1192	1378	743	635	52.4	60.6	46°4	84	1.02	2950	78.2	22.0
42	,, 17	2516	1261	1255	1333	706	627	46.9	52.6	42.2	89	1.12	2484	75*1	4.8
43	,, 24	2755	1426	1329	1450	773	677	42°1	48.8	36.2	88	0.41	1876	72.0	9.2
44 45	" 31 Nov. 7	2819 2736	1405	1414 1352	1709	873 847	836 866	40.0	49.4	34.8	83	0.42	1928	68.9	27.1
46	7.4	2675	1375	1300	1713 1 1675	815	860	42.1	47.9	36.7	84	0.56	1632 1942	65.9	19.7
47	,, 21	2688	1400	1288	1688	838	850	42.7	47.2	38.2	83	0.18	1942	60.7	7·7 6·2
48	,, 28	2530	1324	1206	1596	846	750	39.3	42.2	86.2	85	0.05	2096	58.3	5.3
49	Dec. 5	2419	1268	1151	1604	833	771	39.8	43.7	35.0	80	1.46	2348	56.2	13.8
50	,, 12	2555	1342	1213	1539	789	750	43.8	47.8	37.8	. 88	0.39	2431	55.2	1.0
51	" 19	2522	1285	1237	1459	719	740	34.6	37.5	30°6	91	0.39	1741	54.3	1.8
52	,, 26	1829	904	925	1279	648	631	37.7	41.0	33.2	89	0.47	1698	54.0	1.2
53	Jan. 2	3041	1563	1478	1768	913	855	42.1	47.2	37.2	89	0.32	2422	54.8	4.9

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E 27.—G	TEMPE	
TABI		
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-	Amount collected	0.64	0.35	3.00	0.26	0.57	1.94	1.07	5.06	£2.2	2.80	1.19	3.00	22.42 Sum.	
3i	Number of Lays	6	9	. 55	10	¥G.	14	2	15	23	19	6	22	161 Sum,	۱
Clou	Mean Amount of	8.0	8.9	7.3	6.9	2.0	70 70	ئ. ئ	6.9	2.2	9	6.4	8.1	6.7 Mean.	l
3	₩.	6	00	13	11	ಣ	10	11	10	13	11	-	11	117 Sum.	
IND.	z <u>ů</u>	12	7	<u></u>	. 4	en	-	10	22	10	ao	10	10	85 Sum.	l
M	P	1	10	ಣ	47	10	9	ಣ	හ	4	က	6	တ	65 Sum.	
	Ž.	00	4	9	11	15	1	7	13	೯೨	රා	6	1~	Sum.	
9 E	Mean Weight of Foot of Air,	grs. 549	529	543	547	541	226	526	532	530	541	555	549	542	
=uo H J	Mean Degree o dity. Saturati	- 80	86	85	74	99	89	62	24	85	87	84	68	79	
W I	Rean Additions Required to Sa	grs.	0.2	2.0	1.0	1.6	2.0	2.6	1.3	8.0	9.0	9.0	0.4	1.0	
ano	qsV to thrisW A to took sidnO	grs. 2.6	20.	2.9	5.0	80.	4.4	4.3	4.3	4.4	8.1	2.2	20.2	တ	
eloree	Mean Elastic J	in.	.211	. 250	. 55.	.287	668.	.393	-385	. 5350	-972	.212	.220	162.	
to ex	Mean Temperatu Dew Point.	37.4	35.9	40.3	40.7	43.9	25.7	52.3	51.6	52.0	42.2	0.98	87.0	13.5	
I-IL PAV	Departure from of 125 Years, 17	6.8+	+1.6	+4.6	+5.2	45.5	+6.1	+3.6	-1.4	+0.1	6.2-	-1.9	+1.5	+1.6	
·qj	Mean for the Mor	9	40.3	42.4	48.6	54.8	63.4	62.5	2.69	2.99	46.5	40.6	40.5	50.1	
°95	Mean Daily Rang	0 00 0	10.3	13.4	16.3	9.17	21.8	22.8	17.3	13.3	.12.8	8.6	67	14.7	
-das	Mean of all Lowe	36.2	35.2	39.7	41.1	2.44	- NC CO - NC	8.42	51.7	2.12	40.4	35.8	35.6	43.3	
*189	Mean of all High	44.4	45.5	53.1	7.49	66.1	75.3	9.44	0.69	64.5	53.5	45.6	43.8	28.0	
	Range in Month	24.6	31.9	35.6	35.4	42.6	46.9	43.8	30.2	31.5	81.6	24.4	24.6	33.6	
*:	Lowest by Night	0 0 0 0	24.3	32.1	83.6	35.8	89.8	47.3	45.7	40.3	31.2	26.5	6.98	34.3	
	Highest by Day.	52.9	2.99	2.29	0.69	78.4	4.98	91.1	2.92	71.5	63.4	6.02	51.5	0.89	
io	Mean Reading Barometer,	in. 30*173	30 152	29.641	926.63	30.04F	59.766	29.843	29.848	29.295	29.557	836.62	119.62	29.847	
		*	4 '			•		1				1	•	1	
	res.	,					1				10				
	Mon:	January	February	March -	April .	May -	June .	July .	Angust -	September	October ·	November	December	Means	
	Avee. Av	Mean Blastic Force Weight of Vapour Cubic Foot of Air. Mean Additional Weight of a City. Mean Weight of a City. Mean Weight of a City. Mean Weight of a City. Mean Weight of a City. Mean Men Weight of a City. Mean Men of City.	Highest by Day. Highest by Day. Highest by Day. Highest by Might. Highest by Might. Highest by Might. Highest by Might. Hear of all Highest. Hear	Weight of Paper 19. 18. 2. 2. 2. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3.	Weight of Arien Plean Argument of Olou 133	1886. 1987. 1987. 1988. 19	1886. 1887. 1888. 18	1886. 1887. 1888. 1888. 1888. 1888. 1888. 1889. 1899. 18	17. 18. 18. 18. 18. 18. 18. 18. 18. 18. 18	Mouring to Mannage by Day. 17. 18. 18. 18. 18. 18. 18. 18	MONTHES, MONTH, MONTH	Monthly Monthly Market by Monthly Monthly Market by Mean Reading of Monthly Monthly Market by Might. 1	### The contraction of the contr	### Alean Month, Alean Lowert by Might Highest by Day. 10	### The contract of the contra

	$T\epsilon$	
	Quarterly	•
TABLE 28.—METEOROLOGICAL TABLE FOR LONDON, 1896.	educed from Observations, at Greenwich, under the Superintendence of the Astronomer Royal, and compiled from Q	furnished to the Registrar General by James Glaisher, Esq., F.R.S.)

		Bondon: 14e						
*889	.tdgil	Highest Reading at I	0	28.1	48.0	57.5	58.7	53.0
of on Gra	.tdgi	Lowest Reading at N	0	17.4	17.4	27.2	38.5	24.0
Reading of nometer on	t was	Ароуе 40°.		172	11	52	91	18
Reading of Thermometer on Grass.	Number of Nights it was	Between 30° and 40°.	Sums.	141	20	36	H	-
I	of N	At or below 30°.		53	99	ಣ	0	20
	Rain.	Diff. from Average sray 18 lc	ns. ins.	-2.56	-0.93	-2.89	+1.39	-0.13
		Amount.	Sums.	22.42	3.99	2.11	29.8	66.9
Weight	of a Cubic Foot of Air.	Diff. from Average of 55 Years.	grs.	0	+1	0	T	+1
We	Cubic	Mean.	grs.	542	554	538	529	548
Reading	of Barometer.	Diff. from Average of 55 Years.	in.	+.073	+ .218	+.147	032	040
Read	o Baron	Mean.	ins.	29.847	29-989	29.929 + .147	29.761	29.709
Degree	of Humidity.	Diff. from Average of 55 Years.	-	္	+22	90	r)	es l
		Mean (Sata=100).		7.9	98	69	74	87
ight	in a Cubic Foot of Air.	Diff. from Average of 55 Years.	gr.	-0.1	+0.3	+0.1	2.0-	5.0 -
We	Cubi	Mean,	grs.	50 60	2.2	60 70	4.3	2.2
Elastic	rorce of Vapour.	Piff. from Average streaY 55 to	in.	200.—	720.+	200.+	910	025
E	- Va	Mean.	in.	162.	.228	.313	900	.235
	Air— Daily Range.	Diff. from Average of 55 Years.	0	-1.3	-1.5	-0.5	-1.8	-1.5
	Daily	Mean.	0	14.7	9.01	6.61	18.1	10.3
	Dew Point.	Diff. from Average of 55 Years.	. •	-0.1	+ 25.8	₹.0+	-1.7	-2.0
Jo	Dew	Mean.	0	43.5	37.9	45.8	52.0	38.5
Temperature of	Evapora- tion.	Diff. from Average of 55 Years.	0	₹.0+	+2.4	+1.4	2.0-	11.8
Temp	Eva.	.иези.	0	46.8	40.5	2.09	55.8	40.2
		Diff. from Average of 55 Years.	0	6.0+	+2.2	+2.4	70.5	-1.9
	Air.	Diff. from Average of 125 Years.	0	+1.6	+3.4	+3.3	4.0+	-1.5
	100	Mean.	• 0	20.1	42.2	55.6	4.09	4.2.4
**	Nov., Dec	Autumn . Oct.,			er .	•	٠	•
.ac.	l, May, Ju , Aug., Sel	irqA · · · gnirq2	1896,	YEAR	Winter Quarter	ng do.	Summer do.	Autumn do.
.dor	Feb., Ma				Win	Spring	Sum	Auto

In this Table + and - respectively signify that the number in the preceding column is above or below the average to the amount of the quantities to which these signs are affixed.

	December.	837,879	404,334 483,545	37,331 80,697 119,948 60,910 105,448	161,213 188,001 84,331		December.	186,343,221	99,662,488 86,680,733	11,104,564 18,695,463 31,996,895 17,601,602 20,263,964	32,241,000 39,686,571 14,753,162
	November.	837,129	403,971	37,289 80,639 119,887 60,872 105,284	161,110 188,001 84,047		November.	189,849,780	101,643,486 88,206,294	11,463,344 19,702,193 31,657,101 18,135,471 20,685,377	33,066,000 40,519,000 14,621,294
	October.	836,125	403,624	37,260 80,639 119,795 60,813 105,117	161,032 187,694 83,775	THS OF	October.	198,118,662	106,225,751	11,413,046 20,292,527 33,636,977 18,906,765 21,976,436	34,295,000 42,586,750 15,011,161
	September.	834,780	403,042	37,175 80,505 119,685 60,739 104,938	160,850 187,258 83,630	AVERAGE DAILY SUPPLY OF WATER IN GALLONS DURING THE MONTHS	September.	194,666,858	105,333,846 89,333,012	12,081,518 20,035,712 31,927,484 18,447,059 22,842,073	34,821,000 39,178,829 15,333,183
N	August.	. 833,343	402,318 431,025	37,129 80,351 119,559 60,650 104,629	160,754 186,819 83,452	LONS DURIN	August.	201,499,333	112,033,894 89,465,439	12,988,315 20,910,790 34,179,534 19,506,139 24,449,316	37,892,000 35,226,296 16,347,143
SERVICES IN	July.	832,120	401,866	37,091 80,351 119,400 60,551 104,473	160,483 186,423 83,348	ER IN GAL	July.	237,302,208	128,057,263 109,244,945	15,250,501 23,670,002 37,591,943 22,618,801 28,926,016	43.127.000 46.7 25.873 19.392,072
NUMBER OF	June.	830,753	401,507	37,081 80,351 119,315 60,481 104,279	160,265 185,769 83,212	Y OF WAT	June.	232,283,011	121,578,364	14,451,724 23,401,463 35,015,093 21,709,987 27,000,097	41,691,000 50,398,604 18,615,043
N	May.	829,713	400,799	37,062 80,194 119,164 60,421 103,958	160,115 185,769 83,030	LY SUPPL	May.	218,551,479	115,238,887	13,181,795 22,347,785 34,384,559 20,052,584 25,272,164	38,502,000 47,061,873 17,748,719
	April.	828,533	400,282 428,251	37,012 80,122 119,057 60,354 103,737	160,000 185,326 82,925	RAGE DAI	April.	196,567,394	102,995,954 93,571,440	12,0 95,67 1 19,734,986 32,682,458 17,437,939 21,044,900	33,985,000 43.944,373 15,642,067
	March.	827,230	399,739 427,491	36,975 79,976 118,966 60,294 103,528	159,758 184,915 82,818	AVE	March.	194,063,185	103,072,710 90,990,475	11,717,030 19,094,523 35,223,847 16,439,671 20,597,639	32,385,000 43,428,289 15,177,186
	February.	825,732	398,878 426,854	36,943 79,659 118,827 60,252 103,197	159,639 184,522 82,693		February.	194,300,221	102,312,211 91,988,010	11,356,850 18,873,247 35,516,304 16,443,314 20,122 496	32.642,000 44,021,728 15,324,282
	January.	824,800	898,528 426,272	36,933 79,654 118,757 60,186 102,998	159,546 184,164 82,562		January.	195,265,783	102,401,562 92,864,221	11,507,000 19,312,319 34,793,914 16,607,592 20,180,737	32,322,000 45,399,178 15,143,043
MATHEMATIC	CONTANIES.	Total Services	FROM THAMES FROM LEA AND FROM OTHER SOURCES	* FROM THAMES. CHELSEA WEST MIDDLESEX SOUTHWARK AND VAUXHALL GRAND JUNCTION	FROM LEA AND FROM OTHER SOURCES. NEW RIVER EAST LONDON	COMPANITES	COMPANIES.	Total Quantities supplied -	FROM THAMES . FROM OTHER SOURCES .	FROM THAMES. CHELSEA WEST MUDDLESEX SOUTHWARE AND VAUXHALL GRAND JUNCTION LAMBETH	FROM LEA AND FROM OTHER SOURCES. NEW RIVER EAST LONDON KENT

Note.-. The quantities of water in the above Table include the supply for various purposes other than for domestic consumption.

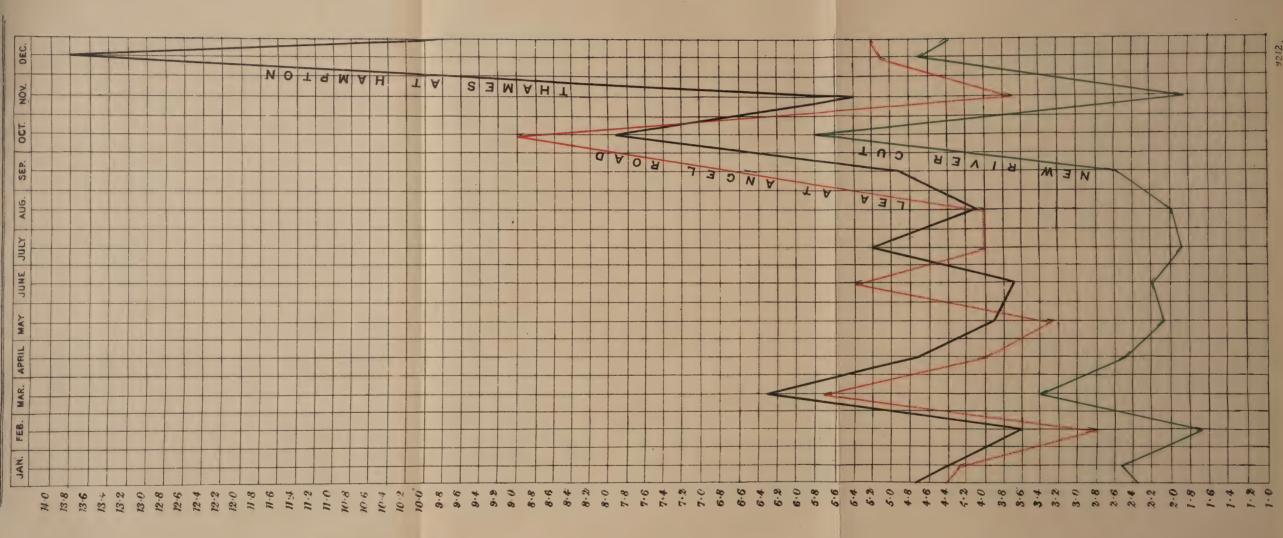
Table 30.—Average Number of Services, and Average Daily Quantity of Water Delivered for all Purposes and for Domestic Purposes, by the London Water Companies during 1896.

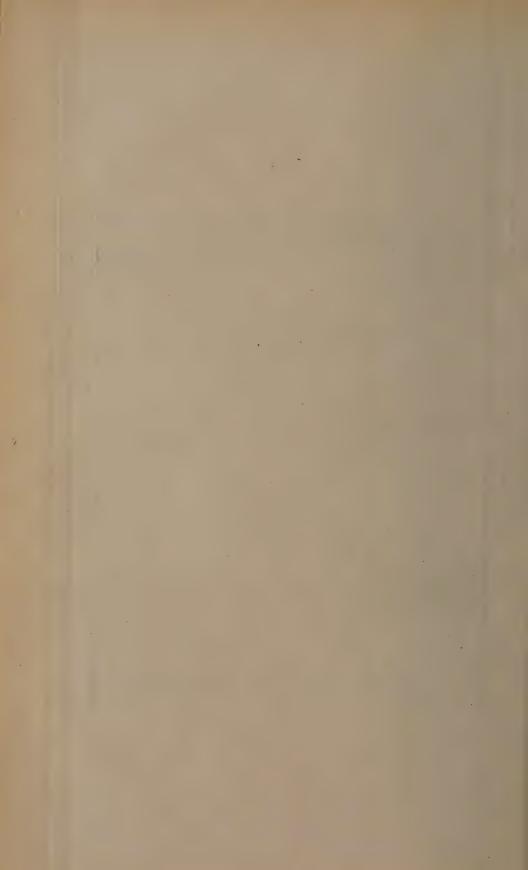
	AVERAGE	AVERAGE DAILY SUPPLY OF WATER DURING THE YEAR.							
WATER COMPANIES.	NUMBER of SERVICES	Deli	vered.	Used for Domestic purposes.†					
	during the Year.	Gallons.	Cubic Metres.*	Gallons.		llons ervice.			
					1895.	1896.			
Total	831,511	203,234,261	923,386	166,652,094	220	200			
FROM THAMES	401,574	108,379,701	492,418	88,871,355	233	221			
,	429,937	94,854,560	430,968	77,780,739	208	181			
From Thames.									
CHELSEA	37,107	12,384,280	56,267	10,155,110	280	274			
WEST MIDDLESEX	80,261	20,505,918	93,168	16,814,853	216	210			
SOUTHWARK AND VAUXHALL	119,363	34,050,492	154,707	27,921,403	250	234			
GRAND JUNCTION -//	60,544	18,658,910	84,776	15,300,306	255	253			
LAMBETH	104,299	22,780,101	103,500	18,679,683	196	179			
From Lea and from other Sources.									
NEW RIVER	166,397	35,580,750	.161,660	29,176,215	197	182.			
EAST LONDON	186,221	43,181,447	196,193	35,403,786	234	190			
Kent	83,319	16,092,363	73,115	13,195,738	175	158			
Columns	1.	2.	3.	4.	5.	6.			

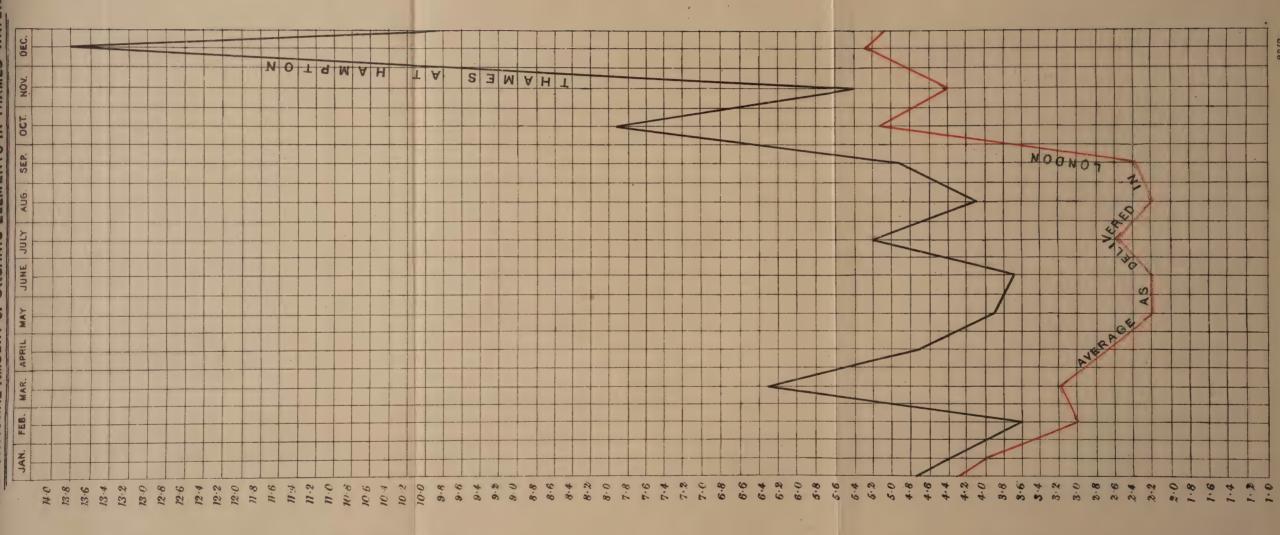
^{*} A cubic metre is equal in volume to 35°3 cubic feet, or to 220°09668 imperial gallons. It is nearly equivalent to the old English tun of four hogsheads, holding 35°248 cubic feet. It is in general use on the Continent; and its volume of water weighs a metric ton, differing inconsiderably in weight from the ton in common use. It is equal to 100 decalitres: thus a decalitre equals 2°2009668 gallons.

[†] According to returns of the London Water Companies made to the Select Committee on East London Water Bills (Session 1867), it is estimated that during the year 1866 about 82 per cent. of the total supply of water for all purposes was for domestic use; this proportion has been applied in estimating the quantities in columns 4, 5, and 6, showing the gallons probably used for domestic purposes. The average daily quantity of water supplied by the London Companies during the year 1896 was 203,234,261 gallons (923,886 cubic metres, equal to about as many tuns by measure, tons by weight), of which about 166,652,094 gallons (757,177 cubic metres) were probably used for domestic purposes. The average quantity used daily for domestic purposes to each service (see Col. 6) is equal to 90 9 decalitres, and, assuming 7 0 persons to each service, corresponds to 28 6 gallons (13 0 decalitres) to each person. The Returns of the Water Companies include services to uninhabited houses.

ELEMENTS IN RAW RIVER WATER AMOUNT OF ORGANIC PROPORTIONAL







REPORT ON the CHEMICAL, PHYSICAL, and BACTERIOSCOPIC EXAMINATION of the WATERS supplied by the METROPOLITAN WATER COMPANIES during the YEAR 1896. By Professor E. Frankland, D.C.L., M.D., LL.D., F.R.S.

Water-analysis Laboratory, The Yews, Reigate, 31st January 1897.

I HAVE to report to you the results of the chemical analysis, and of the physical and bacterioscopic examination, of the water supplied by the eight Metropolitan Water Companies, the Colne Valley Water Company, and the Tottenham Urban District Council, during the year 1896.

At the request of the Associated Metropolitan Water Companies, I have again extended these monthly examinations to (a) the chemical, physical, and bacterioscopic condition of the raw river waters at the intakes of the various Companies, (b) to the bacteriology of these waters after storage, and (c) to the bacterioscopic condition of the water as it issues from the filter beds of each Company, and before it is pumped into the distributing mains.

CHEMICAL AND PHYSICAL EXAMINATION.

A comparison of Diagram No. 1 in my report of last year with the corresponding diagram here given shows that the raw material utilised by the Companies drawing their supplies from rivers during the year 1896 was not so favourable for the operations of these Companies as in the previous year; inasmuch as the floods in the Thames and Lea were not only more numerous but also more severe in 1896 than in 1895.

The only chemical impurity of consequence in these waters is organic matter, the two chief elements of which are carbon and nitrogen. Diagram No. 1 shows the fluctuations of organic matter in the raw river waters taken in by the various Companies drawing their supplies from the rivers Thames and Lea during each month of the year. In this diagram, the proportion of organic matter in a given volume of the Kent Company's water, during the nine years ending December 1876, is taken as unity; the proportions in the same volumes of the river waters are expressed by the ordinates, and the months in which these proportions were found by the abscissæ.

This diagram demonstrates the general chemical superiority of the Lea over the Thames as a raw material. It also shows the greater purity of the Lea in its upper, as compared with its lower, reaches. The comparison of the water of the New River Cut with that of the river Lea at Angel Road, 'where the East London Company's intake is situated, must not, however, be interpreted too strictly, because the New River Cut receives water from the Chadwell spring, and also, during dry seasons, from deep-wells, a large volume of the water of which is pumped into it. As in 1895, so in the past year, the curve of the New River Cut never overtops that of the Lea at Angel Road; and is almost always very much below it. On the other hand, the water of the Lea at Angel Road was in June and again in October markedly inferior to the raw Thames water at Hampton. But this is a rare occurrence; and, generally, the raw water of the Lea at Angel Road is, as the diagram shows, better than that of the Thames at Hampton; this being especially the case in times of flood. Thus in December, when the Thames was organically very impure, the Lea at Angel Road contained a very much smaller amount of organic matter.

The next diagram (No. 2), constructed on the same scale as the last, compares the organic matter in the raw Thames water at Hampton with that of the average filtered water delivered in the Metropolis by the five Companies drawing from this river. This diagram shows how great was the chemical improvement effected by the operations of these Companies even during the severe floods of March, October, and December; although, as the red curve shows, the storage at the command of the Companies did not enable them entirely to circumvent these floods

Diagram (No. 3) compares the raw Lea water at Angel Road with the filtered supply of the East London Company as delivered in London, the scale being the same as before.

The East London Company possesses more storage capacity than that of any other Metropolitan Water Company; but, the diagram proves that even 17 days storage was not sufficient to entirely circumvent the floods of January and October. In February the filtered water was inferior in chemical quality to that of the Lea passing the intake; and the floods in January, October, November, and December markedly affected the quality of this Company's supply. During the other months of the year, the filtered water was, as the diagram shows, of excellent chemical quality.

The next diagram (No. 4) contrasts the organic elements contained in the unfiltered water of the New River Cut with the amount present in the supply of the New River Company; and, in order to compare the water delivered by this Company with the deep-well waters of the Kent, Colne Valley, and East London Companies, and of the Tottenham Urban District Council, I have introduced into this diagram a third curve showing the average amount of organic matter in these last-named waters. I have also marked the average amount of organic elements in the Kent Company's water during the nine years ending December 1876, this being the standard of organic purity used in these diagrams and in all my reports.

This diagram demonstrates that, except in January, February, October, November, and December, the New River Company's supply was free from flood water, and was uniformly of excellent quality. In five months, indeed, even better than the average of the deep-well waters.

All the samples for chemical and physical examination were taken directly from the mains of the several Companies at places recommended by their respective engineers. In addition to the chemical analysis to which each sample has been submitted, the temperature of the water, as it issued from the mains at the time of the collection of the sample, has been determined, and the appearance which the water exhibited on being viewed in a two-foot tube, has been recorded. The results of the chemical analyses and observations of temperature are contained in the accompanying Tables A. to L.

Table A. gives the temperatures of the waters at the time of the collection of the samples. From this table it will be seen that, although the average temperature of the different waters for the year is remarkably uniform, the monthly variations, in the case of the river waters, are very great; whilst the temperature of the deep-well waters is practically uniform throughout the year.

Table B. gives the total amount of solid matters in solution found in 100,000 parts by weight of each water. These solid matters are almost wholly composed of mineral substances, which, in these proportions, in no way diminish the fitness of the water for dietetic purposes. But the salts of lime and magnesia, constituting the principal part of these mineral ingredients, are objectionable; not only because they impart to the water what is known as "hardness," and thus render it unsuitable for washing, but also because they produce incrustations and deposits in steam and kitchen boilers and hot-water pipes. The comparatively slight proportion of organic material which the solid matter invariably contains, is, on the other hand, of more importance; because, if present in too large quantity, it interferes with the palatability of the water and imparts to it a more or less yellowish tint. No unpalatable or objectionably tinted water was delivered in London during the year.

In nature, even the purest waters contain, almost invariably, minute quantities of organic matter; but in river water, the presence of even a small proportion is considered objectionable, partly on sentimental, and partly on hygienic, grounds, by reason of the possible origin of some portions of this organic matter. The water both of the Thames and Lea receives, above the points where it is abstracted for the purpose of the metropolitan supply, various contributions of organic matter of animal origin, such as the drainage from manured land, and the effluents of

LONDON C" WATER. EAST **∞**8 LEA RAW PROPORTIONAL AMOUNT OF ORGANIC ELEMENTS IN

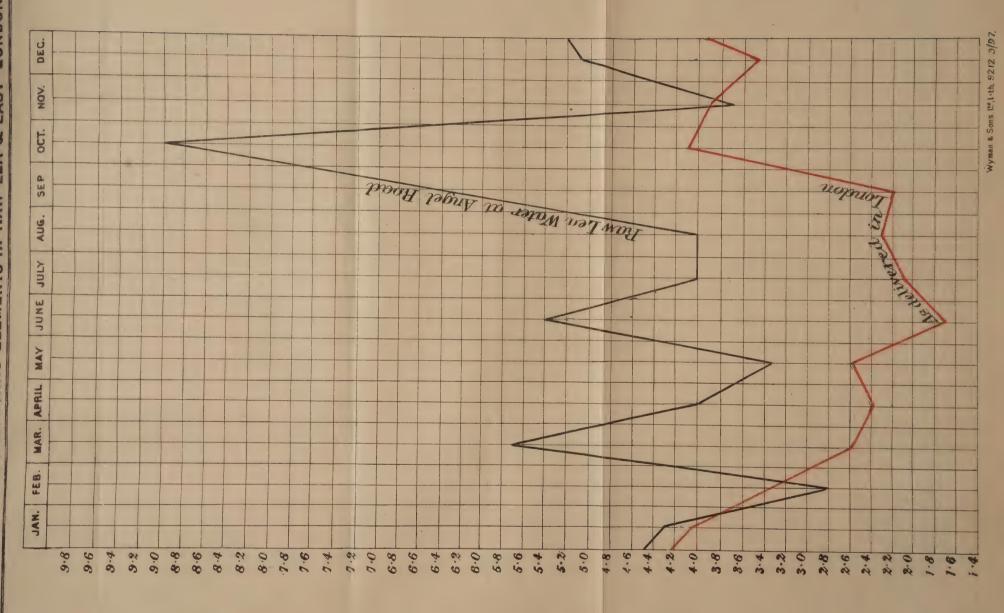
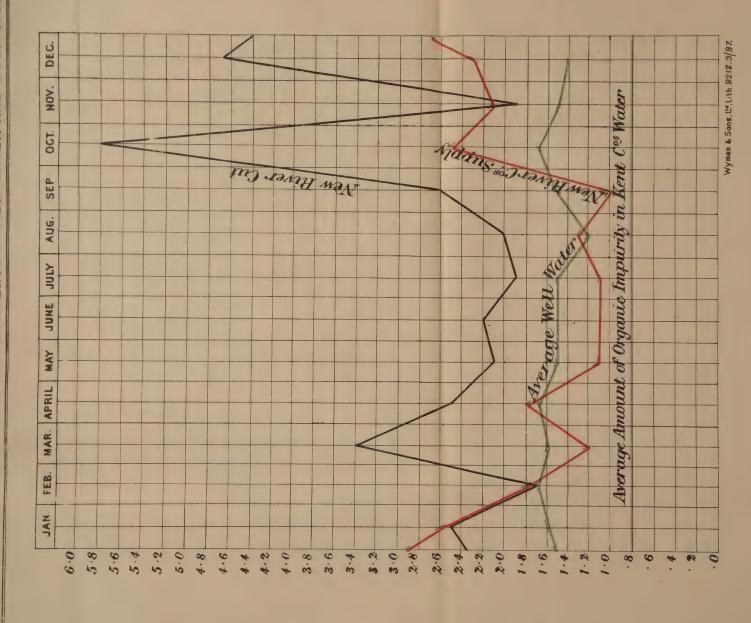




DIAGRAM Nº 4.

PROPORTIONAL AMOUNT OF ORGANIC ELEMENTS IN NEW RIVER AND DEEP WELL WATERS.





This animal matter though innocuous in itself, may at any sewage works. time be accompanied by zymotic matters dangerous to health. But, although the sentimental objection to the presence of animal matter cannot be removed, it is gratifying to find, as the result of recent researches, that the zymotic matters of the pathogenic kind are rapidly destroyed in running water, so that the most minute microscopic inspection of the water as it reaches the intakes of the various Companies has hitherto failed to discover in it a single pathogenic germ. Further, it is now an established fact, that efficient sand filtration would prevent the passage of such germs into the filtered water, even should they arrive in a living condition at the intakes of the Companies. Thus the hygienic objection to the use of filtered water taken from the Thames and Lea is removed. This result of recent observations, conducted in this country, in Germany, and especially in the United States of America, is confirmed by the absence, in London since the year 1866, of zymotic diseases traceable to the water supply. To secure this desirable result, however, efficient filtration is essential; and there can be no doubt that the serious loss of life during the cholera epidemics of 1849, 1854, and 1866 was due to the want of attention to filtration.

The saline matters dissolved in the deep-well water from the chalk are considerably greater in amount than those found in the Thames and Lea; and inasmuch as this chalk water is sent out in its natural condition by the Kent and East London Companies and by the Tottenham Urban District Council, these supplies contained more solid matter than any of the other metropolitan waters. The Colne Valley Company, on the other hand, by treating this chalk water with lime before delivery so reduced the solid matters that the latter were, on the average, about one-third less than the amount present in the river waters, and under one-half of that in the deep-well water, either of the Kent Company or of the Tottenham Urban District Council.

Tables C. and D. are very important; they record the amounts of organic carbon and organic nitrogen in each of the waters, as determined by combustion with oxide of copper. Since these are the only two ingredients of the organic matter which can be accurately determined, these results are the only available evidence of the relative proportions of organic matter present in the waters. The tables show that, whilst the Thames was occasionally considerably polluted by organic matter, the water actually delivered by the Companies drawing from this river was only found to contain it in exceptionally large quantity in the months of January, October, November, and December. The water distributed from the Lea by the New River and East London Companies on the other hand, rarely contained an abnormal proportion of organic matter, and was generally throughout the year superior to the Thames-derived waters of the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies. The New River Company's water never, throughout the year, contained an abnormal amount of organic matter; indeed it rivalled and often surpassed the average deep-well water in respect of organic purity. The supply of the East London Company, although inferior to that of the New River Company, only contained an excess of organic matter in January and October.

The relation between the amounts of organic carbon and organic nitrogen recorded in these tables affords data from which an opinion may be formed as to the origin of the organic matter, whether animal or vegetable. If the relative proportion of nitrogen to carbon be high, the inference is that the organic matter is chiefly animal; on the other hand, if it be low, it is certain that the organic matter is chiefly, if not entirely, of vegetable origin. Examined from this point of view, these tables indicate that the organic matter present in the river water, as delivered in London, was, during the past year, to a very large extent of vegetable origin.

The proportion of organic matter in the deep-well waters of the Kent, Colne Valley, and East London Companies, and in that of the Tottenham Urban District Council, was almost invariably very small.

Taking the mean proportion of organic matter contained in the Thames water delivered in 1868 as 1,000, I find that in subsequent years, 1896 included, the following proportions were present:

Year.	Proportion of Organic Matter present in Thames Water as delivered in London.	Year. Proportion of Organic Matter present in Thames Water as delivered in London,
1868	4.1 4,000	1883 - 850
1869	1,016	1884 - 723
1870	795	1885 839
1871	928	1886 756
1872	1,243	1887 690
1873	917	1888 722
1874	933	1889 677
1875	1,030	1890 680
1876	903	1891 1,002
1877	907	1892 831
1878	1,056	1893 762
1879	1,165	1894 955
1880,	1,254	1895 731
1881 - 1 - 1 - 1 - 1 - 1	993	1896 797
1882 - 3 - 1986 -	1,033	

These figures show that the Thames water distributed during the year 1896 was

somewhat inferior to that delivered during the previous year.

Of the water chiefly derived from the river Lea, that supplied by the New River Company contained, in every case, as usual, less organic matter than that present in the water of the East London Company, which was in this respect, on the average, equal to the best of the Thames waters.

Taking, as before, the mean proportion of organic impurity contained in the Thames water delivered in 1868 as 1,000, I find in that and subsequent years, 1896

included, the following proportions were present in the Lea water:-

1868.	484	1883 - 620
1869	618	1884 500
1870	550	1885 603
1871	604	1886 500
1872	819	1887 473
1873	693	1888 506
1874 1 - 1874	- 583	1889 504
1875	751	1890 - 432
1876	562	1891 684
1877	596	1892 610
1878	747	1893 502
1879	947	1894 554
1880	1,013	1895 541
1881	765 ·	1896 558 -
1882	711	

Thus the Lea water delivered during the year 1896 was of good average quality, although not quite equal to that sent out during the three previous years.

The organic matter found in the deep-well water supplied to London during the past twenty-nine years is, of course, much smaller in amount, and the fluctuations from year to year are, as might be expected, less violent than in the river waters. Referred to the same standard, the figures are as follow:—

Year.	Proportion of Organic Matter present in Deep-well Water as delivered in London.	Year.	Proportion of Organic Matter present in Deep-well Water as delivered in London.
1871 1872 1873 1874 1875 1876 1877 1878	- 254 - 312 - 246 - 150 - 221 - 250 - 287 - 250 - 246 - 243 - 323	1883 1884 1885 1886 1887 1888 1889 1890 - 1891 1892 1893	321 264 200 244 249 241 268 252 357 338 327
1881	387 - 393 - 405 - 409	1894 1895 1896	348 314 374

Table E. shows the proportional amount of organic elements (organic carbon and organic nitrogen) in each of the waters, the average amount of these elements contained in the Kent Company's water during the nine years ending December 1876 being taken as unity.

This table shows that the maximum, minimum, and average proportions of organic matter, as measured by this standard, present in the several waters during the year 1896, were:—

	Sources.	Maximum.	Minimum.	Average.
Deep wells	Kent Tottenham East London Colne Valley	1·1 1·5 2·4 3·3	0·6 1·2 1·2 1·4	0·8 1·3 1·8 2·3
River Lea	- { New River	2·6 4·1	1.0	1·7 2·9
River Thames	Chelsea Grand Junction - West Middlesex - Southwark Lambeth	5·2 5·2 5·2 6·8 5·9	2·1 2·0 2·0 2·1 2·3	3·2 3·1 3·2 3·5

Thus, of the deep-well waters, that supplied by the Kent Company contained, on the average, by far the smallest proportion of organic matter. Of the river water, that sent out by the New River Company stood much higher in organic purity than that delivered by any of the other river Companies. In this respect it more

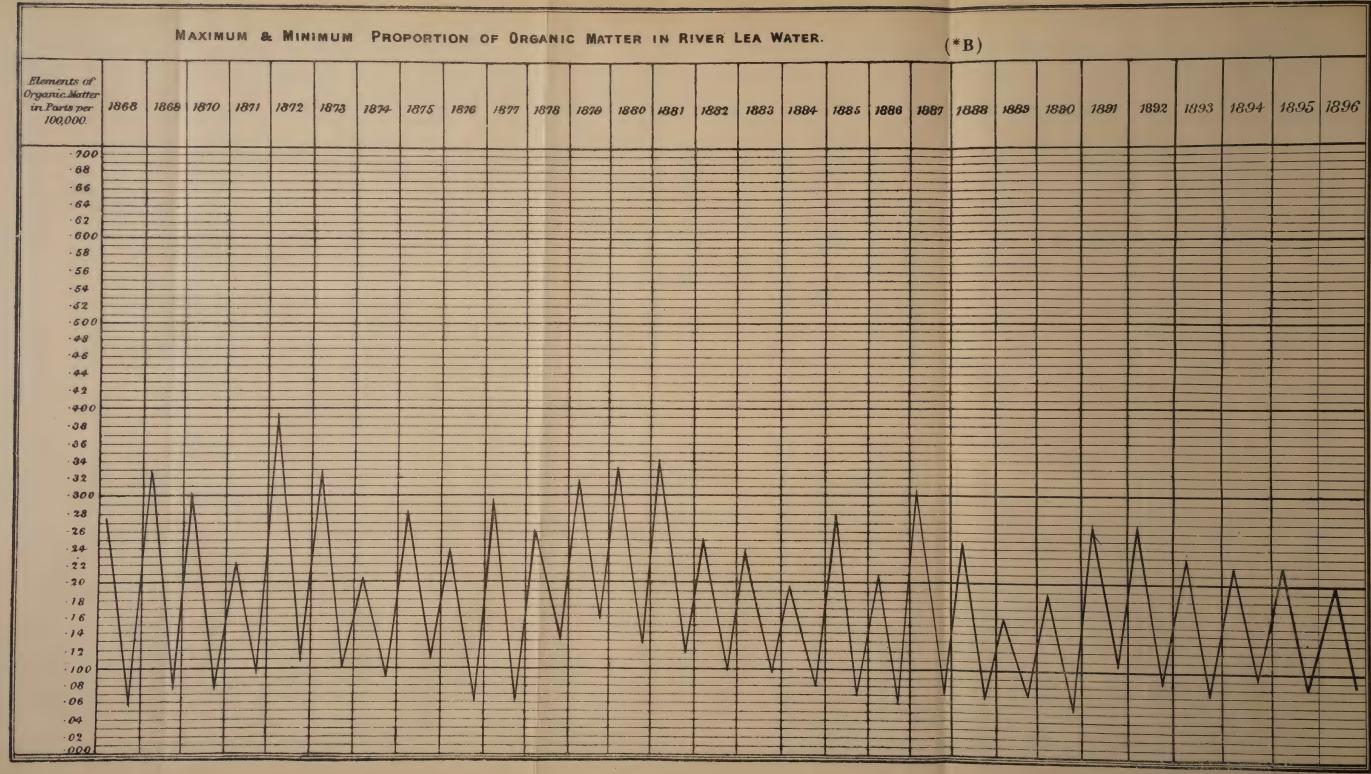
than equalled the East London Company's deep-well water, and considerably surpassed that of the Colne Valley Company. Lastly, the East London Company's water derived from the Lea was, on the average, somewhat superior to any of the Thames-derived waters.

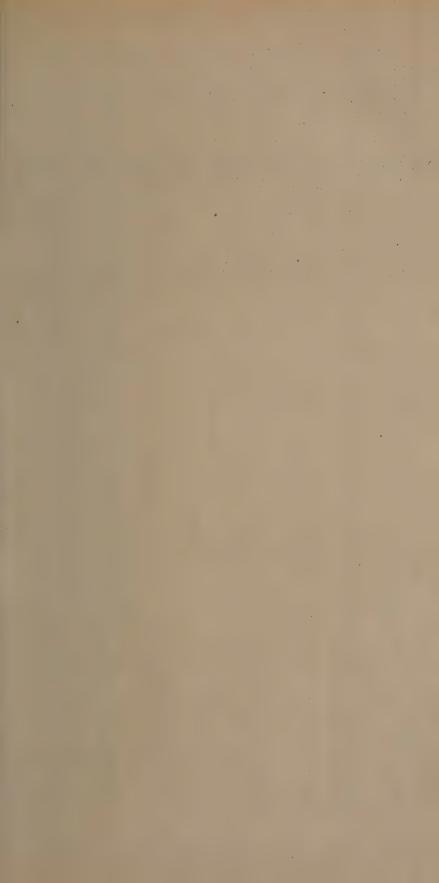
The following table exhibits the maximum amount of organic matter in the waters supplied from the Thames and Lea during the years 1868 to 1896 inclusive, the average of the samples from each source in the month of greatest impurity being taken for comparison:—

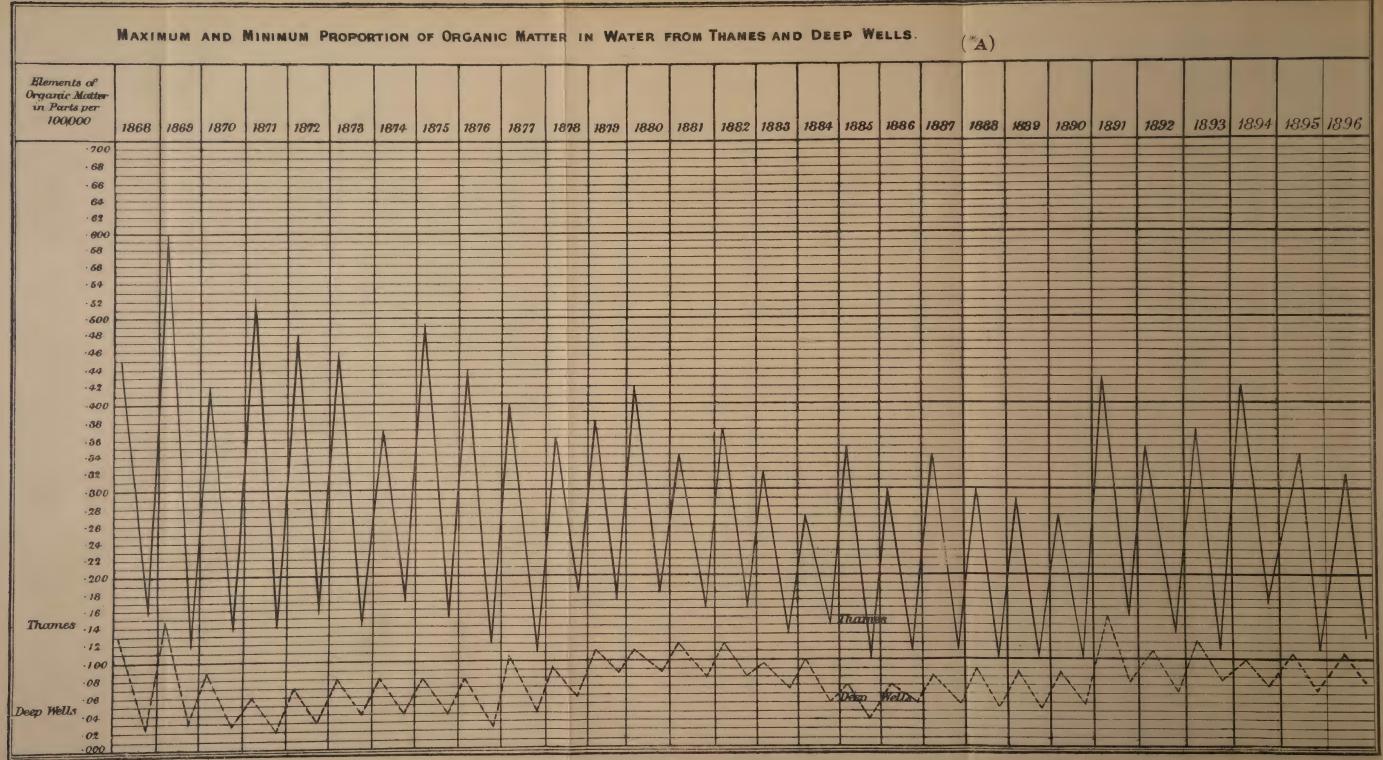
MAXIMUM AMOUNT OF ORGANIC MATTER.

MAXIMUM AMOUNT OF ORGANIC MATTER.							
THAMES.		LEA.					
Year.	Elements of organic matter in parts per 100,000.	Months in which maximum pollution occurred.	Year.	Elements of organic matter in parts per 100,000.	Months in which maximum pollution occurred.		
1868	•45	January.	1868	•27	February.		
1869	•60	February.	1869	•33	February.		
1870	•42	January.	1870	•30	January.		
1871	•52	October.	1871	•22	February.		
1872	•48	January & December.	1872	• 39	December.		
1873	•46	January.	1873	•33	January.		
1874	•37	March.	1874	•21	March.		
1875	•49	November.	1875	•28	November.		
1876	•44	December.	1876	•24	March.		
1877	•40	January.	1877	•30	January.		
1878	•36	December.	1878	• 26	June.		
1879	•38	February.	1879	433	July.		
1880	•42	October.	1880	•33	February.		
1881	*34	February.	1881	•34	February.		
1882	•37	November.	1882	*26	December.		
1883	32	January.	1883	•24	December.		
1884	•27	February.	1884	•20	March.		
1885	•35	November.	1885	•28	December.		
1886	•30	December.	1886	•21	February.		
1887	•34	January.	1887	•31	January.		
1888	•30	December.	1888	•25	December.		
1889	•29	January.	1889	•16	March.		
1890	•27	January.	1890	. •19	January.		
1891	•43	October.	1891	•27	November.		
1892	•35	December.	189 2	•27	December.		
1893	•37	February.	1893	•23	March.		
1894	•42	November.	1894	•22	November.		
1895	•34	November.	1895	' •22	December.		
1896	•32	December.	1896	. •20	January.		
	-						









It is thus evident that the comparatively large amount of organic matter in the Thames-derived water recorded in 1894 was not repeated in the last two years; indeed the proportion was last year lower than in any year since 1890. The maximum organic matter in the Lea was also the smallest observed since 1890.

The variations in the proportions of organic matter in the several supplies are exhibited graphically in the accompanying diagrams (A. & B.), in which the maximum and minimum proportions of organic matter present each year, on the average, in each of the three classes of waters since 1868 are registered.

Tables F. and G., which record the proportions of ammonia and of nitrogen as nitrates and nitrites in the various waters, require no explanation.

In Table H. is given the amount of combined nitrogen, both mineral and organic, found in each of the waters. This total amount is of importance, inasmuch as, after making a small correction for the combined nitrogen present in average rain-water, it sums up the evidence of nitrogenous organic matters which gained access to the water in the past, as well as of those which were still present at the time the analysis was made. In river and surface water generally, this total combined nitrogen undergoes a very appreciable reduction during the warmer months of the year, in consequence of the vegetable life which then abounds in such water. On this account, therefore, the total amount of combined nitrogen found in the river waters in winter can alone be regarded as bearing any relationship to the amount of nitrogenous matters which the waters have received.

The deep-well waters, on the other hand, are not subject to the influence of vegetable life, and the amount of total combined nitrogen is, therefore, equally indicative at all times of the year.

Hence, in the following table, the average proportion of total combined nitrogen in the case of the Thames and the Lea is given for the months of January, February, March, October, November, and December only; whilst, in the case of the deepwells it is calculated for the whole year:—

Year.	Thames.	Lea.	Deep-Wells.			
1887	•307	*352	•365			
1888	•304	•322	•358			
1889	•311	*358	•438			
1890	• 280	•295	•371			
1891	•217	•247	•287			
1892	•292	•332	•271			
1893	. 281	•314	•276			
1894	•303	•319	•293			
1895	•319	*319	•295			
1896	•236	•246	•298			

A comparison of these numbers shows that the total combined nitrogen both in the Thames and Lea was much less than of late years. Of the deep-well waters, those of the Kent and Colne Valley Companies showed a marked decrease, whilst the waters delivered by the East London Company and by the Tottenham Urban District Council showed a slight increase, the average in the four deep-well waters being slightly higher than in any year since 1890.

Table I. exhibits the amount of chlorine present in each of the waters, and indicates that, on no occasion, has brackish or tidal water gained access to the Companies' reservoirs. The amount of chlorine in the Thames-derived water was, on the average, slightly more than in the year 1895, whilst the water delivered by the New River Company contained exactly the same, and that supplied by the East London Company slightly more, in 1896 than in the previous year. Of the deep-well waters, that delivered by the Kent Company contained slightly more and that sent out by the Colne Valley Company exactly the same, whilst the East London and Tottenham waters contained a markedly larger proportion in 1896 than in the previous year.

Table K. gives the hardness of the various waters. The term "hardness" is used to denote the proportion of carbonate of lime, or its equivalent of other soap-destroying substances, present in 100,000 parts, by weight, of the water. The variations in hardness for the several descriptions of water during recent years are given in the following Table:—

Year.	Thames.	Lea.	Kent.	Colne Valley.	Tottenham.	East London Well.
1885	18° • 7	20°•0	27° • 9	4°.8	20°•4	
1886	19°·2	20°•3	29°•4	4° 5	210.3	10 <u></u>
1887	19°-3	20°•8	29°•9	5°•7	20°•5	
1888	20°•0	22° • 0 .	30°·2	7°•5	22°•5	· -
1889	20°•2	22°·1	29°•9	70.0	· 24° · 6	<u> </u>
1890	20°•4	22° · 0	29° · 7	7° 9	23° · 8	-
1891	20° · 3	21°.8	29°•4	8° • 9	24°•4	18° • 9
1892	20°•8	21°•9	28°•4	70.5	23° • 9	19°•2
1893	19° • 6	21°.4	28°•3	70.1	23°•1	20°•2
1894	18° · 8	20°·1	,25°•5	70.4	23°•5	19°•4
1895	19°·4	21°·1	26°•7	7°-3	23°•1	20° 4
1896	20°•0	21° · 5	27° · 9	7°•6	23°·0	14° · 0

The waters derived from the Thames and Lea, and the deep-wells of the Kent Company were all appreciably harder last year than in 1895; the hardness of the deep-well water of the Tottenham Urban District Council and of the Colne Valley Company remained nearly stationary, whilst that of the East London Company was, on the average, much less, owing to the opening of a new well which yields water as soft as that usually obtained by the application of Cla k's process to chalk water. The hardness of the metropolitan water supply is due almost entirely to the presence of bi-carbonate of lime in solution, which can be readily removed by treating the water with lime, as is so successfully done by the Colne Valley Company. Thus the water pumped from the chalk by the Colne Valley Company is, originally, of about the same degree of hardness as the Kent Company's supply; but by treatment with lime before delivery, its hardness is reduced to about one-fourth of its original amount. The hardness of the river-water supplies can be reduced in the same manner. This mode of softening must be considered the most economical, unless it can be shown that less than one-eightieth of the total supply is used for washing, since it entails only about one-eightieth of the expense incurred by the private consumer in the shape of additional soap.

Lastly, Table L. records the averages, for the past year, of each analytical and thermal determination already referred to, and thus gives a general survey of the character of the water delivered by each Company during the year 1896.

In the following table are recorded the results of observations respecting the freedom from turbidity, or otherwise, of the various waters; and, for the purpose of comparison, the results of my first observations in 1868 are also included:—

Companies or Local Authorities.	occasio	Number of occasions when clear and transparent.		ber of ns when turbid.	occasio	ber of ns when bid.	occasio	ber of ns when turbid.
THAMES.	1868.	1896.	1868.	1896.	1868.	1896.	1868.	1896.
Chelsea	7	12	2	. 0	1 1	0	2	0
West Middlesex	12	12	ō	0	Ô	0	o o	ő
Southwark	1	10	5	2	4	o	2	0
Grand Junction	9	12	2	0	î	ő	õ	ő
Lambeth	6	12	1	0	2	0 8	3	ő
Lea.								
New River	10	12	2	0	0	0	0	0
East London	3	10	8	2	1	0	0	0
DEEP WELLS.								
Kent	8	12	3	. 0	1	0	0	0
Colne Valley	_	11		1		0	400	0
Tottenham Urban District								
Council	-	1	neo .	11	_	0	-	0
East London	-	3	-	. 7	-	2	_	0
	-							

This table exhibits the great improvement which the Water Companies who draw their supplies from rivers have effected in filtration since I first began these examinations for turbidity in 1868. In that year, seven samples were so turbid as to be highly repulsive in appearance, nine were turbid, and no less than 20 slightly turbid, whereas during the year 1896 only two samples of filtered water were turbid in the slightest degree. On the other hand, 19 samples of deep-well water, which does not usually require filtration, were slightly turbid, and two turbid, owing, in all probability, to disturbance by the pumping machinery.

The purest water in nature contains abundance of suspended matter; indeed, the beautiful blue colour of the purest Swiss lakes and of the Mediterranean is due to these very fine suspended matters which require years to subside, and which no sand filter will remove, but which may be extracted in the chemist's laboratory to some extent, though not completely, by filtration through specially prepared paper. This fine suspended matter, which is, of course, always present in the most efficiently filtered London waters, is under all ordinary circumstances absolutely invisible to the eye. The water is clear, bright, and transparent, but if a decanter of it be placed in a dark room, and a ray of sunlight or electric light be allowed to fall upon it, the water will be seen to be full of suspended particles which no sand or other practical filter is capable of removing, but which are partially arrested by a hard paper filter supported by a glass funnel. Dr. Tyndall showed, many years ago, that the only way of obtaining water free from suspended matter is to burn a mixture of oxygen and hydrogen, and to condense the steam so produced in carefully cleaned glass or porcelain vessels. The amount of this suspended matter in the efficiently filtered river water supplied to the Metropolis rarely if ever exceeds 0.0002 grain in a tumblerfull; and, therefore, in order to imbibe a single grain, it would be necessary for the consumer to drink no less than 5,000 tumblersfull of the water. Such excessively minute quantities of matter, which is presumably harmless, may safely be neglected; indeed, it is impossible, practically, to obtain water free from it.

Table A.

Temperature (in Centigrade degrees) of the Metropolitan Waters, as delivered from the different Companies' Mains.

COMPANIES			;				1896.					
LOCAL AUTHORITIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
THAMES. (Unfiltered Water) Chelsea	4.2 5.2 5.3 5.7 5.9 5.3 5.2 4.0 5.0	6.4 6.3 6.7 7.4 6.5 7.3 6.4 6.3 6.7	8.7 7.7 7.7 9.7 8.2 8.3 9.7 8.5 9.8 8.7	14.4 10.7 9.0 12.3 11.1 11.4 11.8 11.3 12.5 11.9	17.2 15.0 12.7 17.4 17.3 16.4 16.3 17.4 16.8	18°3 18°3 16°4 20°2 20°3 18°7 18°6 18°3 19°3 19°2	17·2 19·0 18·6 19·6 19·8 19·4 19·3 18·0 20·5 18·4	18*3 18*2 16*7 18*0 19*3 18*3 16*6 17*1 18*5 17*0	18.0 16.0 16.0 16.2 17.8 17.5 17.3 15.7 16.5 16.3 16.7	12.6 12.0 10.7 12.6 12.3 11.8 12.4 10.7 12.3 10.4	5.8 6.4 6.9 7.0 6.4 5.8 6.6 5.3 5.9	5.0 5.6 6.7 7.1 6.5 6.0 3.5 5.8 3.0 5.8

Table B.
Weight of Solid Matters in 100,000 parts of the Waters.

Companies		1896.											
Local Authorities.	Jan. Fe	o. March	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.		
THAMES. (Unfiltered Water) Chelsea - West Middlesex - Southwark - Grand Junction - Leanbeth - Leanbeth - (Unfiltered Water) New Raver - (Unfiltered Water) East London - DEEP WELLS. Kent Colne Valley - Tottenham - East London - East London - East London	34·20 33: 33·70 32: 33·80 32: 33·80 32: 33·80 32: 33·81 32: 33·412 32: 33·42 32: 39·52 38: 38·70 38: 39·56 41: 18·64 18: 41·90 41: 29·00 29:	10 29.70 14 29.80 29.80 26 29.70 31.50 26 29.70 33.60 10 29.30 12 39.72 20 33.96 44 37.06 47.06 48.00 49.76	28 · 32 29 · 30 27 · 94 27 · 54 28 · 46 28 · 40 27 · 40 28 · 26 30 · 88 32 · 70 38 · 90 20 · 18 41 · 54 28 · 64	26*80 25*90 25*50 24*50 26*50 26*20 28*20 29*20 30*70 41*06 17*70 42*60 28*30	25°80 25°72 26°20 25°30 25°40 26°40 30°76 28°56 34°20 27°70 39°60 16°30 40°86 44°30	26*68 24*62 25*04 25*62 24*82 26*20 28*00 28*00 28*46 40*64 16*18 41*86 44*02	25.76 23.76 23.64 24.72 23.66 24.84 29.88 28.56 26.56 29.24 38.32 15.94 41.38 42.62	26*44 23*90 24*80 25*06 25*38 25*90 34*08 29*96 36*84 27*70 19*60 42*44 43*14	32*80 28*20 29*10 30*52 29*06 30*32 32*72 31*44 32*36 34*22 37*28 20*22 42*00 28*66	39°00 32°84 32°54 31°34 32°02 31°24 30°92 32°50 38°80 31°34 37°48 19°28 42°22 42°64	29.56 31.38 30.60 29.92 30.48 33.42 33.32 32.14 40.96 39.98 38.56 19.70 44.00 34.00		

TABLE C.

ORGANIC CARBON in 100,000 parts of the WATERS.

COMPANIES :	1.		÷				1896					
LOCAL AUTHORITIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
THAMES. (Unfiltered Water) Chelsea West Middlesex Southwark Grand Junction Lambeth LEA. (Unfiltered Water) New River (Unfiltered Water) East London DEEP WELLS. Kent Colne Valley Tottenham East London	*222 *286 *228 *192 *168 *219 *135 *218 *213 *044 *096 *068 *107	*175 *145 *187 *146 *167 *152 *083 *143 *178 *088 *128 *067 *102	*310 *127 *150 *177 *181 *171 *161 *061 *282 *132 *035 *172 *065 *069	*226 *155 *122 *135 *146 *119 *096 *195 *123 *065 *110	186 113 108 108 119 117 107 107 103 163 139 1039 096 073 083	*194 *110 *110 *110 *110 *128 *128 *103 *128 *103 *266 *091 *031 *102 *065 *093	*274 *128 *145 *134 *126 *146 *093 *060 *199 *109 *055 *076 *066 *090	*201 *111 *101 *101 *110 *124 *120 *066 *194 *120 *057 *071	*247 *113 *105 *152 *121 *119 *123 *047 *332 *106 *028 *148 *066 *053	*421 *213 *263 *313 *247 *308 *130 *465 *218 *035 *134	*254 *265 *236 *210 *207 *215 *097 *109 *184 *206 *098 *062 *088	*718 *239 *229 *359 *278 *300 *241 *120 *250 *183 *034 *107 *062 *058

Table D.

Organic Nitrogen in 100,000 parts of the Waters.

COMPANIES OR	1896.													
L AUTHORITIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.	
THAMES. Unfiltered Water) helsea - Vest Middlesex - buthwark - rand Junction - ambeth	*040 *030 *030 *021 *027 *030	*035 *028 *028 *034 *023 *022	*060 *019 *019 *029 *023 *027	*049 *026 *021 *020 *016 *027	*045 *015 *018 *018 *019	*023 *016 *015 *015 *016 *014	*030 *015 *021 *016 *017 *021	*043 *019 *016 *014 *021 *024	*044 *016 *014 *019 *021 *020	*048 *025 *045 *041 *027 *040	*066 *043 *033 *032 *028 *031	*097 *027 *033 *040 *030 *045	*048 *023 *024 *025 *022 *027	
LEA. Justificated Water) ew River ew River Justificated Water) ast London DEER WELLS. ent oline Valley ttenham ast London	*015 *022 *034 *029 *011 *025 *012 *016	*016 *016 *025 *025 *025 *009 *024 *008 *014	*038 *008 *054 *019 *005 *024 *008 *010	*029 *011 *042 *016 *007 *022 *013 *011	*016 *009 *030 *014 *006 *018 *014 *016	*025 *006 *050 *011 *006 *021 *013 *020	*020 *007 *035 *013 *008 *024 *010 *017	*016 *010 *039 *016 *010 *021 *018 *017	*033 *013 *053 *021 *008 *020 *013 *015	*042 *018 *065 *025 *007 *021 *008 *009	*014 *016 *036 *027 *007 *016 *013 *035	*036 *015 *048 *021 *011 *029 *008 *017	*025 *013 *043 *020 *008 *022 *012 *016	

TABLE E.

PORTIONAL AMOUNT of ORGANIC ELEMENTS, that in the KENT COMPANY'S WATER during the Nine Years ending December 1876 being taken as 1.

OMPANIES		1896.												
AUTHORITIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.	
THAMES. Infiltered Water) lelsea - est Middlesex - uthwark - and Junction - mbeth LEA. Infiltered Water) lew River	4·4 4·5 4·4 3·6 3·3 4·2	3.6 2.9 2.8 3.1 3.2 2.9	6·3 2·5 2·9 3·5 3·5 3·4	4·7 3·1 2·4 2·6 2·4 2·9	3.9 2.2 2.1 2.0 2.2 2.3	3.7 2.1 2.1 2.2 2.0 2.4 2.2	5·2 2·4 2·8 2·5 2·4 2·8	4.1 2.2 2.0 2.1 2.2 2.5	4.9 2.2 2.0 2.9 2.4 2.4	7*9 4*0 5*2 6*0 4*6 5*9	5*4 5*2 4*6 4*1 3*9 4*2	13.8 4.5 4.4 6.8 5.2 5.8	5.7 3.2 3.2 3.5 3.1 3.5	
Infiltered Water)	4·3 4·1	2·8 3·4	5·7 2·6	4·0 2·4	3.3	5.4	4·0 2·1	4·0 2·3	6.5	9·0 4·1	3.7	5·1 3·5	4.8	
DEEP WELLS. ent lne Valley ttenham st London	0.9 2.1 1.4 2.1	0.8 2.6 1.3 2.0	0.7 3.3 1.2 1.3	0°8 2°7 1°3 2°1	0.8 1.9 1.5 1.7	0.6 2.1 1.3 1.9	1·1 1·7 1·3 1·8	0.8 1.4 1.3 1.5	0.6 2.8 1.3 1.2	0°7 2°7 1°2 2°4	0.7 1.9 1.3 2.1	0°8 2°3 1°2 1°3	0.8 2.3 1.3 1.8	

TABLE F.

Ammonia in 100,000 parts of the Waters.

					_				_			_	
OMPANIES OR	1896.												
AUTHORITIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
THAMES. Infiltered Water) helsea est Middlesex - uthwark and Junction - moeth	*008 0 0 0 0	*306 0 0 0	*018 0 0 0	*012 0 0 0 0	*016 0 0 0 0	*010 0 0 0 0	*002 0 0 0	*012 0 0 0 0	*004 0 0 0	*006 0 0 0	*008 0 0 0	*010 0 0 0 0	*009 0 0 0
LEA. Infiltered Water) ew River - Infiltered Water) st London -	*004 0 *015	*004 0 *008 0	*005 0 *016 0	*006 0 *012 0	*006 0 *012 0	*008 0 *024	*008 0 *002	*006 0 *010 0	*010 0 *022 0	*010 0 *014	*006 0 *014	*006 0 *014 0	*007 0 *014 0
DEEP WELLS. ent lne Valley ottenham ast London	10 1038 1054 1018	0 *058 *060 *004	0 *056 *066 *064	0 *054 *054 *004	0 *044 *060 *018	0 •034 •062 •056	0 *034 *060 *028	0 *020 *068 *064	0 *018 *060 *064	0 •028 •064 •017	0 028 062 052	0 *026 *070 *064	0 *037 *062 *038

Table G.

Nitrogen as Nitrates and Nitrites in 100,000 parts of the Waters.

COMPANIES					**		1896	•				
LOCAL AUTHORITIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
THAMES. (Unfiltered Water) Chelsea West Middlesex Southwark Grand Junction Lambeth LEA. (Unfiltered Water) New River (Unfiltered Water) East London DEEF WELLS. Kent Colne Valley Tottenham East London	*314 *312 *296 *322 *311 *327 *388 *336 *337 *387 *461 *086 trace	*310 *273 *274 *277 *281 *304 *326 *349 *351 *461 *576 *026 trace	*243 *249 *237 *254 *235 *254 *280 *276 *335 *301 *463 *510 *010 *trace	*197 *227 *215 *212 *229 *239 *262 *238 *275 *513 *497 *008 *011	178 185 181 163 188 180 179 188 206 468 490 061 103	154 151 143 113 153 133 176 113 237 153 153 153 153	*134 *122 *110 *117 *122 *145 *166 *129 *156 *404 *452 trace *040	127 111 120 123 135 135 139 098 085 385 460 trace trace	127 147 161 150 190 193 284 172 307 110 432 549 015 frace	*242 *189 *211 *242 *232 *229 *259 *222 *317 *199 *476 *512 *044 *trace	278 250 261 223 265 294 313 290 326 213 470 461 056 015	*198 *253 *250 *250 *262 *293 *330 *272 *334 *826 *471 *512 *049 *025

Table H.

Total combined Nitrogen in 100,000 parts of the Waters.

1	COMPANIES				,			1896	3.					
	LOCAL AUTHORITIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	1
1	THAMES. (Unfiltered Water) Chelsea - West Middlesex - Southwark - Grand Junction - Lambeth - Lambeth - LEA. (Unfiltered Water) New River - (Unfiltered Water) East London	*361 *342 *326 *343 *338 *357 *416 *358 *383 *416	*350 *301 *302 *311 *304 *326 *355 *342 *381 *376	*318 *268 *256 *283 *258 *281 *322 *284 *402 *320	*256 *253 *236 *232 *245 *266 *262 *273 *290 *291	*236 *200 *194 *181 *201 *199 *188 *228 *220	*185 *167 *158 *128 *169 *147 *207 *119 *307 *164	*166 *137 *131 *133 *139 *166 *176 *173 *166 *169	*180 *130 *136 *137 *156 *167 *153 *140 *145 *101	*174 *163 *175 *169 *211 *213 *325 *185 *378 *131	*295 *214 *256 *283 *259 *269 *309 *240 *394 *224	*351 *293 *294 *255 *293 *325 *332 *306 *374 *240	*303 *280 *283 *290 *292 *338 *371 *287 *394 *347	And the second s
Onter	DEEP WELLS. Kent Colne Valley Tottenham East London	*450 *517 *142 *031	*470 *648 *083 *017	.468 .580 .072 .063	*520 *563 *065 *025	*474 *544 *124 *134	*552 * *499 *080 *199	*412 *504 *059 *080	*395 *497 *074 *070	·440 ·584 ·077 ·068	*483 *556 *104 *023	*477 *500 *120 *093	*482 *562 *115 *094	

Table I.

Chlorine in 100,000 parts of the Waters.

	COMPANIES OR	1896.												
Loca	AL AUTHORITIES.	Jan.	Feb.	March.	April.	Мау.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	M
ter Inner Circle.	THAMES. Unfiltered Water) Chelsea West Middlesex Syand Junction Lambeth LEA. (Unfiltered Water) New River Unfiltered Water) East London IDEEP WELLS. Kent Colne Valley Tottenham East London	1.8 1.9 1.8 1.8 1.8 1.9 1.7 1.7 1.8 2.1 2.1 2.1 2.1 2.1	1.8 1.8 1.8 1.8 1.8 1.7 1.7 2.1 2.1 2.4 2.9 2.9	1.8 1.8 1.8 1.9 1.9 1.9 2.2 2.1 2.2 2.1 3.0 2.3	1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 2.0 2.0 2.3 3.0 2.2	1.7 1.8 1.8 1.8 1.8 1.9 1.6 1.8 2.0 2.0 2.0	1.8 1.7 1.8 1.7 1.8 1.8 1.8 1.6 1.6 1.7 2.1 1.9	1.8 1.7 1.8 1.8 1.8 1.8 1.7 1.9 2.1 2.5 2.2 3.0 4.7	1'9 1'9 1'9 1'9 1'9 1'9 1'8 1'8 2'0 2'2 2'3 2'1 4'6	1.9 1.8 1.9 1.9 1.9 1.9 2.2 2.1	2:2 2:1 2:0 2:0 2:1 2:0 1:8 1:9 2:1 2:2 2:3 3:1 2:4	2°0 1°9 1°9 1°8 1°8 1°8 1°8 2°0 2°0 2°3 2°2 4°8	1.8 1.9 2.0 1.9 2.0 1.9 2.0 1.9 2.2 2.1 2.4 2.3 3.4 2.4	

TABLE K.

DEGREES of HARDNESS (1 deg. = 1 part of carbonate of lime, or its equivalent,) in 100,000 parts of the

COMPANIES							1896.						
CAL AUTHORITIES.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean.
THAMES. (Unfiltered Water) Chelsea - West Middlesex - Southwark - Grand Junction - Lambeth - LEA. (Unfiltered Water) New River - (Unfiltered Water) East London - DEEP WELLS. Kent - Colne Valley - Tottenham - East London - Colne Valley - Tottenham - East London - Chemistry - Colne Valley - Tottenham - East London - Chemistry - Colne Valley - East London - Chemistry - Colne Valley - East London - Chemistry - Colne Valley - Colne Valley - East London - Chemistry - Colne Valley	23.6 23.3 23.6 23.9 23.9 24.2 25.1 24.5 27.5 26.6 28.4 8.0 23.3 20.9	23·3 22·1 21·8 22·7 22·1 23·0 23·6 23·3 26·9 26·3 29·0 7·3 25·1 19·1	19.4 19.7 19.4 20.6 19.4 20.3 22.1 20.6 25.4 23.0 26.0 7.0 22.1 20.0	20.9 21.2 20.3 20.0 20.6 20.9 20.0 21.2 22.7 23.6 28.4 9.1 24.5 19.7	19.7 18.9 19.1 18.0 18.9 18.9 21.2 19.1 21.2 20.6	19.7 18.3 18.6 18.6 18.0 20.0 21.8 19.4 23.4 23.4 29.4 7.1 29.4 7.1 23.3 8.4	18·3 18·2 13·0 18·0 18·3 18·9 19·7 19·4 17·1 26·0 6·9 20·6 7·4	17.4 16.0 15.7 16.0 16.0 16.0 20.3 18.0 18.6 15.4 25.1 6.3 22.1	17.1 17.1 19.1 19.4 18.8 18.3 20.9 18.8 22.1 19.1 28.4 7.3 22.4 8.0	20·0 20·9 19·7 20·9 19·7 20·6 21·5 22·4 26·0 22·7 28·4 8·7 22·7 18·8	22.4 21.5 21.2 21.5 20.9 21.8 23.9 22.4 24.5 21.8	20·9 21·8 21·5 20·0 21·2 21·8 24·1 23·9 25·4 25·4 25·4 25·7 23·6 20·9	20·2 19·9 13·8 20·0 19·8 20·4 22·0 21·1 23·6 21·8 27·9 7·6 23·0 14·0

TABLE L.

AVERAGES FOR 1896.

The numbers in the Table relate to 100,000 parts of each Water.

COMPANIES OR LOCAL AUTHORITIES.	Temperature in Centigrade Degrees.	Organic Carbon.	Organic Nitrogen.	Ammonia,	Nitrogen, as Nitrates and Nitrites.	Total combined Ni- trogen.	Chlorine.	Total Hardness.	Proportional Amount of Organic Elements,that in the Keut Company's Water during the 9 years ending Dec. 1876 being taken as 1.	21
THAMES. (Unfiltered Water)	11.9 29.93 11.7 28.44 11.1 28.44 12.9 28.54 12.7 28.44 12.2 29.14	*163 *161 *178 *163	*048 *028 *024 *025 *025 *027	*009 0 0 0 0	*209 *206 *205 *204 *217 *228	*265 *229 *229 *229 *229 *239 *255	1.9 1.8 1.9 1.8 1.9	20°2 19°9 19°8 20°0 19°8 20°4	5.7 3.2 3.2 3.5 3.1 3.5	
LEA. (Unfiltered Water) (Unfiltered Water) (Unfiltered Water) East London	11.9 31.14 11.7 30.27 12.1 34.60 11.9 32.74	*085 *241	*025 *013 *043 *020	*007 0 *014 0	*255 *229 *266 *230	*286 *241 *320 *250	1.8 1.8 2.1 2.1	22:0 21:1 23:6 21:8	2.8 1.7 4.8 2.9	To the second
DEEP WELLS. (Kent	12·4 39·18 - 18·32 - 41·98 - 35·98	*113 *065	*008 *029 *012 *016	0 *037 *062 *038	*461 *494 *031 *027	*477 *546 *093 *075	2°4 2°2 3°1 3°5	27.9 7.6 23.0 14.0	0.8 2.3 1.3 1.8	

E.—The numbers in these tables may be converted into grains per imperial gallon by multiplying them by 7, and then g the decimal point one place to the left.

BACTERIOSCOPIC EXAMINATION.

Whilst there is no water in nature either chemically pure or free from suspended matter, neither is there any, available for the wants of man, biologically pure. It is true that, on rare occasions, samples have been drawn from beneath the filter beds or from the deep wells of a water company absolutely free from microbes and their germs, yet it is practically impossible to convey such water to the consumer in this sterile condition. During its passage through the mains it becomes again inhabited by crowds of living organisms.

The bacterioscopic examination of water used for dietetic purposes has of late years assumed great importance in hygiene. It has demonstrated that the domestic use of water which has been neither naturally nor artificially filtered is attended with great risk to life, if that water has been exposed to excremental pollution; whereas water, even much contaminated with pathogenic microbes, may be drunk with safety if previously submitted to efficient sand filtration. It has also supplied a test for the efficiency of filtration which is far more delicate than that contemplated by the Act of 1852, viz., freedom from opalescence or visible particles in suspension; for this parliamentary test may acquit a water which contains many millions of microbes in a thimblefull.

These bactericlogical investigations, however, have given rise to a widespread error as to the conclusions to be drawn from the bacterial condition of the filtered river waters supplied to the Metropolis. It has been assumed that if these waters contain many microbes they are necessarily unwholesome or, at least, to be regarded with suspicion. In the case of the metropolitan water supply there is no foundation whatever for this conclusion. No pathogenic organism has ever been found in the water of the Thames or Lea at the intakes of the various water companies, and, a fortiori, never in their filtered supplies, and, in the absence of the pathogenic, there is no evidence whatever that ordinary river microbes, including coli communis, ever caused injury to health; they appear to be quite harmless. Nevertheless, if a pathogenic germ should, at any time, be present in the raw river water, it would be extremely unlikely to pass through an efficient filter removing 99 out of every 100 microbes present in the raw waters.

The standard of 100 microbes per cubic centimetre, as an indication of efficient bacterial filtration, adopted by Dr. Koch and myself is, of course, purely arbitrary. I consider it a sufficient, but not unduly severe test, to apply to the filtration of the river derived supplies of the London Water Companies, but I desire it to be distinctly understood that the infraction of this standard does not throw suspicion upon the wholesomeness of the water, neither do I consider that the presence of B. coli communis in water is a proof of sewage contamination, because this organism is one of the most ubiquitous and persistent of harmless microbes.

For the purposes of this report, the samples of water submitted to bacterioscopic examination were collected at the works of the respective Companies immediately after the water left the filters, and before it was pumped into the distributing mains; and occasionally separate observations were made upon the effluents of individual filters so as to ascertain whether they were doing their work efficiently. It is of little use examining the filtered water delivered in London, not only because it is a mixture of the effluents from many filters, but especially because the multiplication of ordinary river and harmless microbes is so rapid that the number is generally increased manifold between the filtration works and the standpipes in London. Thus on the 4th of November last, whilst the filters of the Chelsea Company were delivering water into the distributing mains containing only 12 microbes or germs in a cubic centimetre, the same water drawn from a stand-pipe near the Horse Guards contained 180 per c.c., and again in December, whilst the Lambeth Company's filters were passing water containing only 116 microbes per c.c., a sample drawn from one of their standpipes in town contained 1,560 in the same volume.

By the examination of the water as it issues from the filters, the utmost freedom from microbes, or maximum degree of sterility, of each sample of water is determined. This utmost freedom from bacterial life, after all sources of contamination have been passed, is obviously the most important moment in the history of the water; for, the smaller the number of microbes found in a given volume at that moment, the less is the probability of pathogenic organisms being present; and, although the non-pathogenic may afterwards multiply indefinitely, this is of no consequence in the initial absence of the pathogenic. In this determination of maximum sterility, it is of the utmost importance that multiplication should be prevented during the few hours which, in the absence of suitable arrangements at the works of the different Companies, must necessarily clapse before the sample can be submitted to cultivation in my laboratory. This is secured by hermetically sealing the glass tubes containing the samples and then packing them in ice. At the freezing point of water, microbes either do not multiply at all, or do so with extreme slewness.

Although the collection of samples for microbe cultivation on the works of the seven different Water Companies drawing their supplies from rivers, these works being situated at wide distances apart, entails great additional labour, which can only be performed by an expert in bacteriology; it is the only trustworthy method by which the efficient filtration and comparative bacterial purity of the metropolitan waters can be ascertained. Whenever this examination proves any filter to be working unsatisfactorily, the attention of the engineer in charge is at once directed to the circumstance.

Of collateral interest also is the contemporaneous bacterial condition of the Thames and Lea at the intakes of the Companies drawing from these rivers, and I have therefore submitted to examination samples of the unfiltered water passing the intakes of the various Companies at the time the filtered samples were collected. In addition I have frequently examined the water which is pumped by some of the Companies from the gravel flanking the Thames at Hampton, and also samples of Thames and Lea water after more or less prolonged storage in subsidence reservoirs, but before filtration. In carrying out this tedious and delicate investigation the Associated Metropolitan Water Companies have unreservedly placed their plant at my disposal, and their respective engineers have afforded me every facility in their power, for which I desire here to record my thanks.

I have again to call attention, however, to the great desirability for the establishment of small bacteriological laboratories at Hampton, for the examination of the Thames-derived waters, and at Green Lanes and Lea Bridge for the examination of the very important supplies drawn from the Lea by the New River and East London Companies.

The deep-well water of the Kent Company does not require filtration, and the samples for microbe cultivation have therefore been taken from the water as it was discharged from the pumps.

In connection with this work I have again to thank my chief assistant, Mr. W. T. Burgess, F.I.C., for his very efficient help in the prosecution of this laborious investigation.

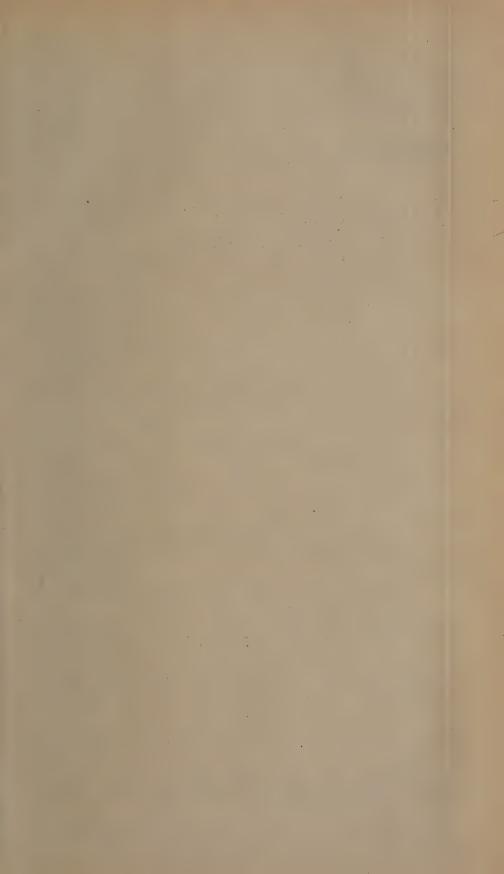
The results of these examinations made during the year 1896 are contained in the following tables; and, in order that the conditions, as regards storage and filtration, under which the seven Companies drawing from rivers work, I have added, in each case, the amount of storage before filtration, the depth of sand on the filter beds, and the rate of filtration. These additional data are taken from the monthly reports of the Water Examiner:—

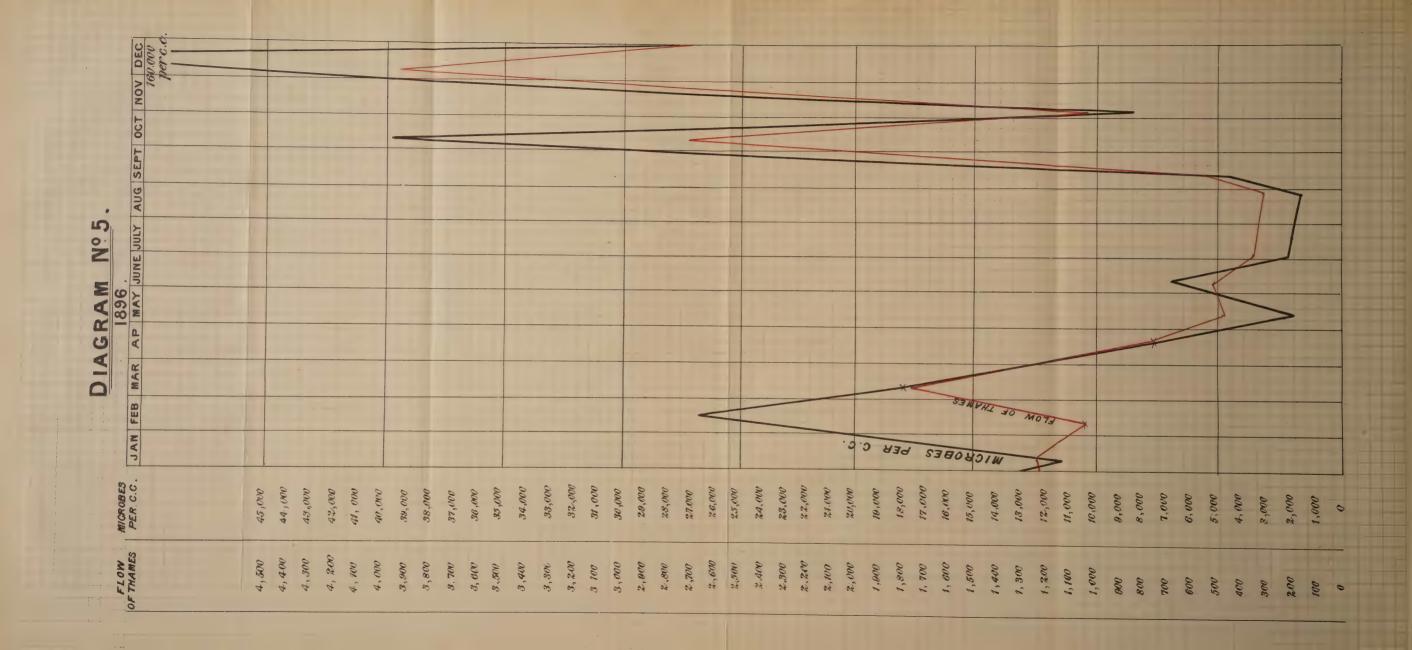
TABLE No. 1.—MICROBE DETERMINATIONS IN UNFILTERED WATERS.

	JANI	UARY.	FEBR	RUARY.	MA	RCH.	AP	RIL.
SOURCE OF SAMPLE.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.
Thames at Hampton	o 4°2	11,560	6'4	26,800	8.7	18,000	° 11.4	7,520
Ditto after storage (12 days) by Chelsea Co.	4.1	1,360	5:7	460	7°4	240	10.3	lost
Ditto ditto (5.6 days) by West Middlesex Co.	4.0	3,460	5.8	1,820	. 7*9	2,340	11.0	720
Ditto ditto (10 days) by West Middlesex Co.		-	-	-	-		-	_
Ditto ditto (over 1 month) by Southwark Co.	-	_		_	-	-	-	
Ditto after "preliminary" filtration by Grand Junction Co.	4.9	280	7.0-	480	9.5	460	11.6	1,240
Ditto ditto ditto passing to Kew filters by ditto.	4.8	300	7.0	320	9.0	300	11.6	980
Ditto after storage (5.3 days) by Lambeth Co.	4.6	6,560	6.5	``13,380	8*4	5,120	10.7	5,340
New River Cut just before entering reservoirs.	4.8	2,510	7:3	2,080	9.7	4,240	11.8	1,340
Ditto ditto passing from 1st to 2nd reservoir.	4.6	1,580	6.4	2,360	. 9*4	2,360	11.8	lost
Ditto ditto after leaving 2nd reservoir.	5.4	1,040	6.4	1,580	9.5	1,820	11.7	500
Lea at Angel Road, East London Co's intake.	4.0	6,720	6.3	7,880	9.8	20,640	12.2	lost
Ditto after storage (17 days) East London Co.	3.8	3,140	5*8 ,	1,600	8.4	1,460	12.3	lost

	M.	AY.	Jυ	NE.	Jυ	LY.	Aug	ust.
SOURCE OF SAMPLE.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.
Thames at Hampton	17.2	2,060	18'3	6,760	° 17°2	2,220	0 18.3	1,740
Ditto after storage (12 days)	15.3	140 {	18·3* 19·8	980 } 1,320 }	18.0	420	18.7	200
by Chelsea Co. Ditto ditto (5.6 days) by West Middlesex Co.	14.7	280 {	18°5 20°5	640 } 1,360 }	19.1	680	18.4	300
Ditto ditto (10 days) by West Middlesex Co.	-	275	-,-	'- .	-	-	-	_
Ditto ditto (over 1 month) by Southwark Co.	-			-		-		
Ditto after "preliminary" filtration by Grand June-	15*8	700	18.6	520	18.1	340	19.3	52)
Ditto ditto ditto passing	16.2	380 {	19°3 20°5	$\frac{460}{720}$	18.7	480	19.3	500
to Kew filters by ditto. Ditto after storage (5.3 days) by Lambeth Co.	15.7	1,080 {	18°4 19°8	1,420 } 1,140 }	17.5	1,340	18°5	600
New River Cut just before entering reservoirs.	17.4	1,340	18°6	1,640	19.3	1,500	16.6	840
Ditto ditto passing from 1st to 2nd reservoir.	16.8	620	18.7	780	-	-	17.0	760
Ditto ditto after leaving 2nd reservoir.	16.6	300	18*2	420	18.3	480	17.6	340
Lea at Angel Road, East London Co's intake.	17.4	8,180	19*3	11,720	20.5	2,680	18.2	6,020
Ditto after storage (17 days) East London Co.	17°3	1,180	19.3	2,340	20°3	1,520	17.6	2,140

^{*} In all cases in which brackets are used in these tables, the numbers included in them refer to samples collected on different days. For the exact dates, see my monthly reports.





	SEPT	EMBER.	Oct	OBER.	Novi	EMBER.	DECE	EMBER.	Mean
Source of Sample.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Microbes per c.c.
Thames at Hampton	18:0	4.300	12.6	39,760	5.8	8,560	p.0	160,000	04107
Thames at Hampton	100	4,000	12 0	99,700	90	0,000	9.0	160,000	24,107
Ditto after storage (12 ays) by Chelsea Co.	17.4	140	12.7	340	6.0	280	4.4	854	508
Ditto ditto (5.6 days) by West Middlesex Co.	17.3	120	12.2	740	5.4	5,520	4.9	41,600	4,882
Ditto ditto (10 days) by West Middlesex Co.	+		-	erood.	-	- ,	4.7	11,920	11,920
Ditto ditto (over 1 month) by Southwark Co.	-				ennia		5.3	920	920
Ditto after "preliminary" filtration by Grand Junction Co.	18.0	260	13.2	880	7.2	2,440	6.3	53,200	*5,110
Ditto ditto ditto passing to Kew filters by ditto.	17.9	460	13.0	600	7.2	720	5.8	22,800	2,369
Ditto after storage (5°3 days) by Lambeth Co.	17.7	1,080	12.4	4,660	6.4	2,920	5.0	56,000	8,280
New River Cut just before entering reservoirs.	15.7	2,540	12.4	4,400	5.8	3,200	3.2	14,540	3,347
Ditto ditto passing from 1st to 2nd reservoir.	-		, streets		-		-	-	1,410
Ditto ditto after leaving	16:7	660	12.3	820	5.8	4,880	3°5	7,480	1,693
Lea at Angel Road, East London Co's intake.	16.3	32,000	12.3	12,220	5.3	10,880	3.0	80,000	18,085
Ditto after storage (17 days) East London Co.	16.1	2,160	12.7	1,460	5°4	3,200	3.7	13,420	3,056

These results of the bacterioscopic examination of the unfiltered waters used by the Metropolitan Companies are very instructive. They again show the remarkable effect of storage in reducing the number of bacteria. Thus, in December last, whilst the Thames at the intakes of the Companies drawing their supplies from that river contained the enormous number of 160,000 microbes per c.c., the Chelsea and Southwark Companies with 12 days and one month's storage, were supplying their filters with water containing only 854 and 920 microbes respectively in the same volume. Again, the New River Company, with only four days storage, was able, in December, to supply its filters with water containing only 7,480 microbes per c.c., whilst the water of the New River Cut contained nearly double that number in the same volume; further, the East London Company, with 17 days storage, kept the number down to 13,420 per c.c., although 50,000 per c.c. were passing the intake at Angel Road.

This table also exhibits the very great variations in microbial life which occur in the raw river waters in the course of the year. These variations have been attributed at different times to changes of temperature, or exposure to varying amounts of sunshine, low temperature appearing to favour either the multiplication or the preservation of microbes, whilst exposure to sunshine has been shown, by Dr. Marshall Ward, to be very inimical to bacterial life. I have proved, however, that in rivers like the Thames, these influences have little or no effect upon microbial life, the number of microbes in a given volume of Thames water being practically governed by the rainfall; that is to say, by the volume of the stream.

The following table and diagram (No. 5) show this effect of rainfall upon the number of microbes very conclusively. They compare the volume of water in the river, as gauged at Teddington Weir, with the number of microbes found in the raw Thames water at Hampton on the same day. In this diagram the numbers representing the flow of the river in millions of gallons per 24 hours and the numbers of microbes per c.c. of water, both run from the bottom of the diagram upwards and are represented by the ordinates, whilst the abscisse denote the months in which the several determinations were made. For the gaugings of the Thames at Teddington Weir, I am again indebted to the kindness of Mr. C. J. More, the engineer to the Thames Conservancy Board; but in the diagram, 100 millions of gallons are added to the daily flow, this being, approximately, the volume of water taken out of the river above Teddington Weir by the water companies. Comparing

the two columns of numbers in the table and the two curves on the diagram, there will be found a remarkably close relation between these numbers and curves respectively. This year's observations, therefore, confirm the conclusion arrived at from similar observations carried on during the four preceding years; and what is true of the Thames in this respect is doubtless true also, approximately, of the Lea and other rivers:—

COMPARISON OF NUMBER OF MICROBES WITH VOLUME OF THAMES AT TEDDINGTON WEIR.

DATE.	Flow of River in Gallons daily.	No. cf Microbes per c.c.	DATE. Flow of River in Gallons daily. No. of Microbes per c.c.
January 10th	1,152,500,000	11,560	July 2nd - 261,800,000 2,220
February 10th	948,400,000	26,800	August 24th
March 10th	1,672,600,000	18,000	September 9th - 10 430,800,000 4,300
April 18th	741,900,000	7,520	October 8th 2,624,500,000 39,760
May 12th	374,600,000	2,060	November 4th - 929,700,000 8,560
June 10th	421,000,000	6,760	December 8th - 3,839,900,000 160,000

The following tables represent the bacterial condition of the water as it issued from the filter beds of the various Metropolitan Companies during the year 1896, comparing it with the raw material dealt with by these Companies.

The Chelsea Company.

Amount of storage and - which are the storage and -	12.0 days.
Average thickness of sand on filters to the second	4 feet.
Average rate of filtration per square foot per hour	1.75 gallo
Maximum percentage of microbes removed	99.92
Minimum percentage of microbes removed	
Average percentage of microbes removed	99.86

TABLE No. 2.-MICROBE DETERMINATIONS in CHELSEA COMPANY'S WATER

	JANU	JARY.	FEBE	UARY.	MAI	RCH.	АР	RII.
Source of Sample.	Temp.	Microbes per c.c.	Temp. C.	Microbes per c.c.	Temp. C.	Microbes per c.c.	Temp.	Microbes per c.c.
Thames at Hampton	4·2 4·1 3·8	11,560 1,360 20	6·4 5·7 5·8	26,800 460 44	8°7 7°4 7°7	18,000 240 28	10°3 10°4	7,520 lost
Source of Sample.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.		Microbes per c.c.
Thames at Hampton , after storage , after filtration -	17·2 15·3 15·2	2,060 140	0 18'3 {18'3 19'8 {18'6 19'8	6,760 980 \ 1,320 \ 348 \ 8 \}	17·2 18·0 18·1	2,220 420 20	18·3 18·7 18·8	1,740 200 18

	SEPTEMBER.		Oct	rober.	Nov	EMBER.	DEC	Mean	
Source of Sample.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per e.c.	Microbes per c.c.
	0		0				6		
Thames at Hampton	18.0	4,300	12.6	39,760	5.8	8,560	5.0	160,000	24,107
" after storage	17.4	140	12.7	340	6.0	280	4°4	854	508
" after filtration -	17.5	2	12.6	8	6.6	12	4*6	55	34

Except in June this Company delivered water of uniformally excellent quality, rivalling, in many cases, deep-well water in this respect. In reference to the exceptional samples in June, see remarks on page lxxxi.

West Middlesex Company.

Amount of storage - - - - 5 · 6 days.

Average thickness of sand on filters - - - 2 · 75 feet.

Average rate of filtration per square foot per hour

Maximum percentage of microbes removed - 99 · 94

Minimum percentage of microbes removed - 91 · 48

Average percentage of microbes removed - 93 · 79

TABLE NO. 3.—MICROBE DETERMINATIONS in WEST MIDDLESEX COMPANY'S WATER.

	JAN	UARY.	F	BRUARY.		M	ARCH	r. ''	AP	RIL.
Source of Sample.	Temp.	Microbes per c.c.	Tem C.			Temp		crobes	Temp.	Microbes per c.c.
Thames at Hampton , after storage , , after filtration -	4·2 4·0 4·0	11,560 3,460 — 44	5.	26,80 8 1,82 —	00	8·7 7·9 —	1	8,000 2,340 —	11.4 11.0 —	7,520 720 —————————————————————————————————
Source of Sample.	Temp.	Microbes per c.c.				Temp		crobes	Temp.	Microbes per c.c.
Thames at Hampton ,, after storage ,, , ,, after filtration -	17·2 14·7 —	2,060 280 —	18° { 18° { 20° 	3 6,70 5 69 5 1,30	60 40 60 76 26	17·2 19·1	the second secon	2,220 680 — 8	18·3 18·4 — 18·4	1,740 300 —
SOURCE OF SAMPLE.	Temp.	Microbes per c.c.		Microbes per c.c.	-	mp. Mic			Microbes	Mean Microbes per c.c.
Thames at Hampton ,, after storage ,, after filtration	18.0 17.3 — 17.6	4,300 120 — 14	12.6 12.5 —	39,760 740 — 30	- Par		,560 ,520 —	5°0 4°9 4°7 4°3	160,000 41,600 11,920 120	24,107 4,882 11,920 51

Excepting in June and December, this Company delivered water of most excellent bacterial quality, not unfrequently rivalling or excelling, in this respect, the deep-

well water of the Kent Company. The infraction of the standard (100 microbes per c.c.) in December was only slight (120), but that in June was more serious. In reference to this sample, see page lxxxi.

Southwark and Vauxhall Company.

Amount of storage - - - - 4·1 days.

Average thickness of sand on filters - - 2·5 feet.

Average rate of filtration per square foot per hour - 1·5 gallon.

Maximum percentage of microbes removed - 100·00

Minimum percentage of microbes removed - 84·33

Average percentage of microbes removed - 97·77

TABLE 4.-MICROBE DETERMINATIONS in SOUTHWARK COMPANY'S WATER.

	JAN	UAR Y.	FEI	BRUARY.	M	ARCH.		AP:	RIL.
SOURCE OF SAMPLE.	Temp.	Microbes per c.c.	Temp.	Microbe per c.c.		Microl per c.		Temp. C.	Microbes per c.c.
Thames at Hampton	4.5	11,560	6.4	26,800	8.7	18,00	00	0 11°4	7,520
" after storage -							•		
No. 2 filter -	:	. —	-	- 1	-	-		_	· —
No. 3 ,, -	-	- .	-	-	8*4	10	00		· -
No. 4 " -	4.3	28	6*3	. 24	-			10°5	. 8
No. 5 " -				-:	_	-	1		-
No. 8 " -	4.6	36	6.0	444	8.2	10	04	19.7	2,224
	M	[AY		JUNE.		ULY.		Aug	UST.
SOURCE OF SAMPLE.	Temp.	Microbes per c.c.	Temp C.	Microbe per c.c		Micro per c		Temp.	Microbes per c.c.
Thames at Hampton	°	2,060	0 18.3	6,760	17.2	2,2	20	° 18.3	1,740
" after storage -	-		-	_	_	-		wines	
" " filtration— No. 2 filter -	,	_		-	-	-		18.0	. 12
No. 3 " -	-		-	-1.	17°1	3	48	-	
No. 4 " -	15.6	16	18.3	16	_				-
No. 5 " -	15.4	56	18.3	32	-	-			-
No. 8 " -		-	-	-	16.2		28	18.0	12
	SEPTI	EMBER.	Осто	BER.	Noveme	ER.	DEC	EMBER.	Mean
SOURCE OF SAMPLE	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp. Mic pe	robes T	emp. C.	Microbe per c.c.	
Thames at Hampton - •	18.0	4,300	12.6	39,760	5'8	3,560	° 5°0	160,000	24,107
" after storage •			-	-		-	5.3	920	920
" " filtration No. 2 filter -	_	-	_	_			_	-	12
No. 3 " •	-			- 1	7.0	76		-	175
No. 4 ", "	17.2	0	12.3	4	-	-	5.2	40	17
No. 5 , -		-	-	-		-	-	-	44
No. 8 " -	17.1	68	12.4	28	2.8	208	5.0	16,000	. 1,915

The filtration plants of the Chelsea and West Middlesex Companies deliver the filtered water into general receptacles or wells, from which the samples for bacterioscopic examination were drawn, and there was consequently no opportunity at these works, for obtaining separate samples from each of the filter beds. At the Southwark Company's works, however, I have been able to obtain samples from several separate filters, and the above table, giving the results of the examination of these samples, shows several cases in which effective bacterial filtration was not attained. Thus, No. 3 filter was not working satisfactorily in July, Nos. 4 and 5 filters were uniformly and highly satisfactory on every occasion when samples were drawn from them, the water issuing from No. 4 on September 9th being absolutely sterile; but filter No. 8 yielded, on four out of 10 occasions, unsatisfactory results. Although No. 8 filter leaves much to be desired, this Company's record is, on the whole, greatly superior to that of 1895.

Grand Junction Company.

Amount of storage	4	3.3 days.
Average thickness of sand on filters	-	2.25 feet.
Average rate of filtration per square foot per hour	-	1.63 gallon.
Maximum percentage of microbes removed	-	99.98
Minimum percentage of microbes removed	-	84.03
Average percentage of microbes removed -	-	99:31

TABLE No. 5 .- MICROBE DETERMINATIONS in GRAND JUNCTION COMPANY'S WATER.

	JAN	UARY.	FEBI	RUARY.	Ма	RCH.	APRIL		
Source of Sample.	Temp. C.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	
Thames at Hampton	° 4°2	11,560	6.4	26,800	° 8°7	18,000	0 11.4	7,520	
Thames after "preliminary"	4.5	280	7.0	480	9.2	460	11.6	1,240	
filtration. Thames, after "preliminary" filtration, passing to Kew	4.8	300	7.0	320	9.0	300	11.6	980	
filters. Thames, after filtration, at	4.4	48	5.8	124	7.8	240	11.3	68	
at Hampton. Thames, after filtration, at	4.4	28	6.4	24	9.3	28	11.6	260	
Kew Bridge. Thames, after filtration, South filter, Kew Bridge.	5.3	. 8	7.3	100	9.7	24	11.6	8	
	12								
	M	AÝ.	Ju	'NE.	Jτ	ILY.	Αυ	UST,	
SOURCE OF SAMPLE.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	
	0.		0		0		. 0		
Thames at Hampton	17.2	2,060	18°3	6,760	17.2	2,220	18.3	1,740	
Thames after "preliminary"	15.8	700	18.6	520	18.1	340	19.3	520	
filtration. Thames, after "preliminary" filtration, passing to Kew	16.2	380	{ 19.3 20.5	460 720}	18.7	480	19.3	500	
filters. Thames, after filtration, at	16.3	. 32	18.4	56	17.2	38	18.4	24	
Hampton. Thames, after filtration, at	15.4	80	{ 18.4 20.2	$1,080 \}$	18°1	26	18.7	30	
Kew Bridge. Thames, after filtration, South filter, Kew Bridge.			19.0	16	, was		19.3	8	

	SEPT	SEPTEMBER.		OBER,	Nov	EMBER.	DEC	Mean	
SOURCE OF SAMPLE.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp. C.	Microbes per c.c.	Microbes per c.c.
	0 '		0		0		0		
Thames at Hampton	18.0	4,300	12.6	39,760	5*8	8,560	5.0	160,000	24,107
Thames after "preliminary"	18.0	260	13.2	. 880	7.2	2,440	6.3	53,200	5,110
Thames after "preliminary" filtration, passing to Kew filters.	17.9	460	13.0	600	7.2	720	5.8	22,800	2,369
Thames, after filtration, at	17.8	120	12.7	126	5.8	244	5°5	3,034	346
Hampton. Thames, after filtration, at	17.6	6	12.7	12	6.0	70	5.3	118	116
Kew Bridge. Thames, after filtration, South filter, Kew Bridge.	-	-	13.0	8	6.6	16	5*3	168	40

The small amount of storage possessed by this Company renders it difficult at all times to maintain efficient bacterial filtration, and six out of the 12 samples collected at the Hampton works during the year contained an excess of microbes or their spores over 100 per c.c.; whilst five out of the 22 samples collected at the Kew works also contained an abnormal number. As-was the case with several other Companies, the most serious infractions of the standard occurred in June.

Lambeth Company.

Amount of storage		A 15 %		-	6.0 days:
Average thickness of	sand on filters				2.8 feet.
Average rate of filtra	tion per square foot	per hou	r -	-	2.08 gallon.
Maximum percentage	of microbes remov	ed -	→ 1	- 2	99 · 97
Minimum percentage	of microbes remov	ed	-	7.	96.45
Average percentage of	of microbes removed			- :	99.81

TABLE No. 6.-MICROBE DETERMINATIONS in LAMBETH COMPANY'S WATER.

	JAN	UARY.	FEBI	RUARY.	MA	RCH.	APRIL.		
Source of Sample.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	
Thames at Hampton , after storage , ,, filtration -	4*2 4*6 3*7	11,560 6,560 56	6*4 6*2	26,800 13,380 56	8*7 8*4 8*3	18,000 5,120 40	11°4 10°7 10°4	7,520 5,340	
Source of Sample.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp. Microbes per c.c.		Temp.	Microbes	
Thames at Hampton , after storage , , filtration -	17·2 15·7 15·3	2,060 1,080 8	18·3 { 18·4 } { 19·8 } { 18·7 } 19·5 }	6,760 1,420 } 1,140 } 240 }	17·2 17·5 17·9	2,220 1,340	18°3 18°5 18°5	1,740 600 . 60	

	SEPTEMBER.		Oc	TOBER.	Nov	EMBER.	DEC	Mean	
Source of Sample.	Temp.	Microbes per c.c.	Temp. C.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Microbes
	Ω;		. 0				10 .	1	標
Thames at Hampton -	.18.0	4,300	12.6	39,760	5°8	8,560	5.0	160,000	24,107
" after storage 🕝 👵	. 17.7	1,080	12.4	4,660	6°4	2,920	5.0	56,000	8,280
" " filtration -	17.5	, 30	12.7	12	6.6	24	5.2	116	. 47

Excepting in June and December, this Company delivered water of excellent bacterial quality, the infraction of the standard in June being the only serious one; but, even in this month of abnormal results, the number of microbes was much less than that found in the water of three of the other Thames Companies. Altogether, the record of this Company is very good, and is free from violent fluctuations. In December, for instance, when the Thames contained the enormous number of 160,000 microbes per c.c. and the stored water supplying the filters as many as 56,000, the number was reduced to 116 per c.c.

New River Company.

Amount of storage		-	-	-	-	4.4	days.
Average thickness of sand	on filte	rs	-	-	-	1.8	foot.
Average rate of filtration	per squa	re foot p	er hou	r	-	2.29	gallons
Maximum percentage of m	icrobes	removed	l	**	-	100.00)
Minimum percentage of m	icrobes	removed	-	-	-	77.14	Į.
Average percentage of mis	crobes r	emoved		-	-	99.07	7

TABLE No. 7.—MICROBE DETERMINATIONS in NEW RIVER COMPANY'S WATER.

	JAN	UARY.	FEBI	RUARY.	MA	RCH,	APRIL.		
Source of Sample.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	
The second secon	0,		. 0,				0	1	
New River Cut before entering subsidence reservoirs.	4*8	2,510	. 7.3	2,080	9.7	4,240	- 11*8	1,340	
New River Cut passing from 1st to 2nd reservoir.	4.6	1,580	6.7	2,360	9.4	2,360	11.8	lost	
New River Cut after leaving subsidence reservoirs.	5'4	1,040	6°4	1580	9*2	1,820	11.2	500	
New River after filtration:— General well	4.4	26	6.0	24	8.7	. 12	11.2	4	
No. 1 well	-		-	-	siere	-	-,	-	
No. 2 . ,, -	·				8*5	12	· done		
No. 3	4.6	40	_			-	_	a-resident and a second	
No. 4 "	-	-	-		_	-	11*4	4	
No. 5 ,		,	_	_	8*8	8	ennese		
No. 6			-	′	_			_	
No.7 "	4.6	28	5*9	20	_		_	_	
No. 8 ,				-			10.7	0	
No. 9 ,		1 1 -	5*8	48		-			

	M	AY.	Ju	NE.	Jt	JLY.	August.		
SOURCE OF SAMPLE.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	
	0		0,		0	7 200	0	840	
New River Cut before entering	17.4	1,340	18.6	1,640	19.3	1,500	16.6	840	
subsidence reservoirs. New River Cut passing from	16.8	620	18.7	780		-	17.0	760	
1st to 2nd reservoir. New River Cut after leaving subsidence reservoirs.	16.6	300	18*2	420	18'3	480	17.6	340	
New River after filtration:— General well	16.8	12	18:3	· 24	18.7	20	. 17*4	4	
No. 1 well	16.3	4	-			-		_	
No. 2 "	-	_				-	-	. —	
No. 3	-		18.7	12	-				
No. 4 ,		*	-		-	-			
No. 5 ,	tueno.		_		. 18*9	4	-	_	
No.6 ,,	16.8	. 4		_	graphy	-	17:3	4	
No.7 "	_	-	18.7	16		-	-	-	
No. 8 ,,	-	_	.,	_	-	-	18.0	192	
No. 9 "	<u> </u>	-	_	-	18*5	12	. —	-	

	SEPT	EMBER.	Oct	TOBER.	Nov	EMBER.	DEC	EMBER.	Mean
SOURCE OF SAMPLE.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Microbes per c.c.
New River Cut before entering subsidence reservoirs. New River Cut passing from 1st to 2nd reservoir. New River Cut after leaving subsidence reservoirs. New River Cut after leaving subsidence reservoirs. New River after filtration:— General well No. 1 well No. 2 ,, No. 3 ,, No. 6 ,, No. 6 ,, No. 7 ,, No. 8 ,,	15·7	2,540 	12·4	4,400 	5 · 8 5 · 6 5 · 4 5 · 4 	3,200 4,880 162 28 16 	3.5	14,540 	3,347 1,410 1,693 48 4 13 23 12 6 4 17
No. 9 " ·	-	-				-			30

This table shows that, out of 34 samples collected during the year, only three transgressed the standard of 100 microbes per c.c., whilst one was absolutely sterile. Five out of the three transgressions occurred in November and December, when extensive repairs were being made in the filtered water culverts. The samples collected on six occasions from the general filter well compare favourably, in respect of bacterial purity, with the deep-well water of the Kent Company.

East London Company.

Amount of storage	•	· •	•	-	-	15.0 days.
Average thickness of s	and on	filters	•		-	2.0 feet.
Average rate of filtration	on per s	quare fo	ot per h	our	-	1.33 gallon.
Maximum percentage	of micro	bes rem	oved ,	- "	-	99.93
Minimum percentage	of micro	bes rem	oved	- ' -		97.03
Average percentage of	microb	es remov	ved ·	_'	-	99.56

TABLE 8.-MICROBE DETERMINATIONS in East LONDON COMPANY'S WATER.

	JA	NUARY.	F	EBE	UARY.		,	MA	RCH.	.	Ap	RIL.
Source of Sample.	Temp.	Microbe per c.c.			Micro per c			mp. C.		robes	Temp. C.	Microbes per c.c.
Lea at Angel Road Intake -	• 4•0	6,720	6.	3	7,88	30		9.8	20	,640	0 12.2	lost
" after storage	3.8	3,140	5.	8	1,60	00		8*4	1	,460	12.3	lost
" " filtration, No. 1 Essex Well.	3.7	68	5.	2	. 4	4		8.2		40	11.4	52
,, ,, No. 2	3.8	16	5*	3	. 2	28		8.3		56	11.1	lost
Essex Well. Middle- sex Well.	3.6	- 120	5*	3	13	86		8*3		52	11.1	52
	MAY.		,	Ju	NE.	1	JULY.				Ave	UST.
SOURCE OF SAMPLE.	Temp.	Microbe per c.c.	Tem C.		Micro per c			mp. C.		robes	Temp.	Microbes per c.c.
Lea at Angel Road Intake •	o 17·4	8,180	19	3	11,75	20	2	° 20•5	1	2,680	° 18°5	6,020
" after storage - •	17:3	1,180	19	3	2,3	40	2	20.3		1,520	17.6	2,140
" " filtration, No. 1 Essex Well.	16.6	68	18	4	16	60	1	19.3		32	17.3	8
" No. 2 Essex Well.	16.7	36	18	7	3	18	1	18.9		60	17.5) 12
" " " Middle- sex Well.	16.3	140	181	3	11	16	1	18*3		36	17.5	184
	SEPT	EMBER.	Oc	гов	ER.	N	NOVEMBER.		R.	B. DECEMBER.		
Source of Sample.						-	1				1	Mean Microbes
	Temp. C.	Microbes per c.c.	Temp. C.		crobes	Ter	mp.	Micro per	obes c.c	Temp.	Microbe per c.c.	
Lea at Angel Road Intake •	° 16.3	32,000	° 12·3	1	2,220	•	o 5·3	10,8	90	9.0	80.000	10.005
	16.1	2,160	12.2		2,220 1,460		5°4	3,2		3.7	80,000	18,085
Glantian No. 1	16.7	2,100	12.4		32		5.3		82	3.4	13,420	3,056
Essex Well.	16.9	48	12.7		52		2.3		68	3.3	148	71 79
" " Essex Well. " " Middle- sex Well.		-	12.3		76		2.3		36	3.6	56.	91

From this table it will be seen that out of 34 samples, eight contained a number of microbes in excess of the standard; three of these were taken from three different filter wells in the month of June, when the filtration plants of nearly every A 95984.

Metropolitan Water Company, for some unexplained reason, were simultaneously unable to perform efficiently their work of bacterial purification. Up to the present time, I have endeavoured in vain to find an explanation of this singular phenomenon. If it had occurred only in one or two cases, it might have been attributed to accident or carelessness, but the general occurrence proves that the cause must be some condition or conditions affecting both Metropolitan rivers. Of the five Companies drawing from the Thames, all except the Southwark were smitten with this microbial epidemic in June, and even the Southwark had got it on the 2nd of the following month. Of the two Companies drawing from the Lea, the New river alone escaped; owing, no doubt, to the exceptional sources from which it derives its raw water. The East Loudon Company had it rather severely, every one of its filter wells yielding in June water containing an excess of microbes.

There were two conditions prevailing in June last which rarely occur together, viz., a high temperature and an excessive number of microbes in the raw river waters. It is possible that these conditions have favoured the multiplication of bacteria in the lower part of the filter beds, and thus caused the high proportion of microbes in the effluents.

Kent Company.

This Company supplies only deep-well water, which is delivered in a clear and bright condition to consumers as it is pumped from the wells. It requires neither storing nor filtration. The water probably always arrives at the wells absolutely free rom microbes, the small number per c.c. usually found being doubtless derived from accidental and unavoidable contamination by the pumping machinery. In 7 out of 11 examinations made during the year, the number of bacteria per c.c. did not exceed 7; and, in January, the water was absolutely sterile. Even this Company's water, however, infringed the standard once; for in May the sample yielded on cultivation 146 microbes per c.c.

TABLE 9.—MICROBE DETERMINATIONS in KENT COMPANIES' WATER.

	Jan	UARY.	FEB	RUARY.	Ма	RCH.	APRIL.	
Source of Sample,	Temp.			Microbes per c.c.	Temp.	Microbes per c.c.	Temp. C.	Microbes per c.c.
Well at Deptford	° 11.3	0	0 11.3	4	11*3	6	0	
	М	MAY.		UNE.	Ju	LY.	Aug	UST.
Source of Sample.	Terap.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.	Temp.	Microbes per c.c.
Well at Deptford	11.3	146	0 11.3	3	° 11.3	4	° 11.3	7
	SEFTE	MBER.	Осто	BER.	November. I		CEMBER.	Mean
Source of Sample.		Microbes 7.		icrobes Te	mp. Microper		Microbe per c.c.	
Well at Deptford	11.3	6	11.8		1.3	o 45 11.4	17	23

In all the foregoing illustrations of the comparative efficiency of the filtration plants of the various Metropolitan Companies, comparison has been made between the microbial contents of the raw river waters and the filter effluents; but, as the Companies enjoy the advantage of storage in very different degrees, and one of them (the Grand Junction) employs preliminary filtration, it is obvious that this comparison does not correctly indicate the comparative efficiency of the various filtration plants in the removal of microbes, although it correctly indicates the total bacterial improvement effected by the operations of the various Companies, for the whole of which they deserve the credit. It is, however, both of interest and importance in regard to the construction of filters, to separate the improvements produced by final sand filtration from that brought about by storage or preliminary filtration.

In the following tables, therefore, I have compared the bacterial quality of the waters supplied to the filters with that of the effluents issuing from them, and have given in a separate column the percentage of microbes still present in the effluents from the filters. It is hoped that such a record of the actual bacterial work performed by the filters will afford valuable information to the engineers of the different Metropolitan Companies supplying river waters.

I have also added a table intended to show the effect of the degree of fineness of sand upon bacterial filtration. In the third column of this table, the size of the grains of sand is indicated by the percentage which will pass through a copper gauze sieve of 1,600 meshes to the square inch, the maximum diameter of grains capable of passing this sieve being just under 0.4 millimetre.

In these tables the month of June is omitted from the calculations, because of the widely abnormal results obtained during that month and alluded to at page lxxxi. The Southwark and Lambeth Companies also could not be included in the tables, because at the works of these Companies it is impossible to collect, for bacteriological cultivation, satisfactory samples of the water supplying the filters.

Chelsea Company.

Reduction of Micro-organisms by actual filtration.

Mont	h		Org	- %		
		Before filtration.		After filtration.	Organisms left in.	
January -		~	1,360		20	1.5
February -	• 1	-	460		44 .	9.6
March -	- ,	mi ^{re}	240		28	11.7
April -	#1		lost		4	
May -	-		-140		24	17.1
June -	-	-	1,150		178	15.5*
July	ala	md?	420		20	0.6
August -			200		18	4.8
September -	4 -		140		2	1.4
October 👵 🗕	130	-	340		8	2.4
November		· magnet	280		12	4.3
December	-	-	854		55	6.4
Mean	•.	-	- ·			6.0

^{*} Omitted from the average in all these tables.

West Middlesex Company.

Reduction of Micro-organisms by actual filtration.

Month.				Organism	Organisms		
nionus.				Before filtration.	After filtration.	left in.	
January		•	•	3,460	44	1.3	
February		-		1,820	16	0.9	
March -	-	_	-	2,340	24	1.0	
April	-	_	-	720	20	2.8	
May -		-	-	280	4	1.4	
June	<u>.</u>		_	1,000	301	30·1*	
July -	_	4	an i	680	8	1.2	
August	-,			300	6	2.0	
September			÷	120	14	11.7	
October	-	_		740	30	4.1	
November	-	-	-	5,520	25	0.4	
December	-	2	<u>.</u>	26,760	120	0.4	
	7:			-			
Mean	-		-		- Controller	2.5	

Grand Junction Company (Kew Bridge Works).

Reduction of Micro-organisms by actual filtration.

Month.	Organism	°/₅ Organisms	
Month.	Before filtration.	After filtration.	left in.
January	300	28	9.3
February	320	24	7.5
March	300	28 ·	9.3
April	980	260	26.5
May %	380	. 80-	21.1
June	567	376	~ 66.3*
July - 6	480	26	5.4
August	500	30	6.0
September	460	6.	1.3
October	600	12-	·· 2·0
November	720	70	9.7
December	22,800	118	0.2
Mean	_	_	~ . 8.9

^{*} Omitted from the average in all these tables.

New River Company.

Reduction of Micro-organisms by actual filtration.

March	Organism	Organisms		
Month.	Before filtration.	After filtration.	left in.	
January	1,040	26	2.5	
February	1,580 1,820	24 12	1.5	
April	500	4	0.8	
May	300	12	4.0	
June	420	24	5.7*	
July	480	20	4.2	
August	340	4	1.2	
September	660	12	1.8	
October	820	12	1.5	
November	4,880	162	3.3	
December	7,480	266	3.1	
Mean			2.2	

East London Company.

Reduction of Micro-organisms by actual filtration.

January 3, February 1, March 1, April 1, June 2, July 1, August 2, September 2,	6140 6600 6460 7180	68 69 49 	Organisms left in. 2 · 2 4 · 3 3 · 4 6 · 9 26 · 7*
February - - 1, March - - 1, April - - - May - - 1, June - - 2 July - - 1, August - - 2 September - - 2	,600 ,460 ,180	69 49 81	4·3 3·4 — 6·9
March 1, April 1, May 2, June 2, July 1, August 2, September 2,	,180	49	3·4 — 6·9
April	,180	81.	6.9
May 1 June 2 July 1 August 2 September 2	,180	- 81	
May 1 June 2 July 1 August 2 September 2	- 500		
July - - 1 August - - 2 September - - 2	,340	624	96.7*
August - - 2 September - - - 2			20 1
September 2	,520	43	2.8
	,140	68	3.2
October 1	,160	41	1.9
	,460	53	3.6
November - 3	,200	62	1.9
December 13	,420	145	1.1
Mean			3.1

^{*} Omitted from the average in all these tables.

Degree of Fineness of Sand.

Month.	-hedall	Thickness of Sand.	Percentage of Sand of less than 4 m.m.	Organisms left in.
THAMES. Chelsea West Middlesex Grand Junction		4.00 feet 2.75 ,, 2.25 ,,	26·10 78·19 28·70	6·0 2·5 8·9
LEA. New River - East London	-	1·8 " 2·0 "	60·26 33·12	2.2

Neglecting the results obtained in June, which were altogether abnormal, the comparison made in the last table strikingly exhibits the enormous advantage of fine sand in securing efficient bacterial filtration. Thus 1.8 foot of the fine sand of the New River Company, and 2.75 feet of that of the West Middlesex Company are, respectively, more than twice as efficient as 4 feet of the coarser material used by the Chelsea Company. It is true that the West Middlesex Company filters somewhat more slowly than the Chelsea Company; but, on the other hand, the filtration rate of the New River Company is considerably greater than that of the Chelsea Company. Indeed the rate of filtration adopted by the New River Company is considerably higher than that of any other Metropolitan Water Company, and yet the bacterial efficiency of this Company's filters surpasses that of all the others.

I am, &c. E. Frankland.

The Registrar General, &c., &c., Somerset House, W.C.

FIRES IN LONDON DURING THE YEAR 1896.

The Chief Officer of the Metropolitan Fire Brigade reported to the London County Council that the number of fires attended during 1896 was 3616, being 17 less than the number in the preceding year, but exceeding by 863 the average in the ten years 1886-95. According to this report the lives of 261 persons were seriously endangered, and 106 of these were lost. The numbers of lives lost by fires in London in the four preceding years were 64, 82, 82, and 91 respectively.

fires in London in the four preceding years were 64, 82, 82, and 91 respectively.

The staff of the Metropolitan Fire Brigade at the end of the year was distributed at 58 land engine stations, 5 floating stations, 3 sub-stations, 15 street stations, and 2 waggon stations; there were also 60 hose cart, 11 hose and ladder truck, and 204 fire-escape duties. The number of fire engines at these stations was 143, a decrease of one from the number in the previous year; 9 were floating steam engines, 57 land steam engines, and 77 manual engines. The authorised strength of the brigade included 842 firemen of all ranks. The cases of injury occurring in the brigade during the year were 110, against 98, 115, and 106 in the three preceding years.

Number of Fires and of False Alarms attended during the Eleven Years 1886-96, and in each Month of 1896.

		TOTAL		Fires.					
YEARS AND MONTHS.		CALLS.	FALSE ALARMS AND CHIMNEYS.	Serious.	Slight.	Total.	Per-centages.		
1							Serious.	Slight.	
	1886	2853	704	151	1.998	2149	7.0	93.0	
	1887	3059	696	175	2188	2363	7.4	92.6	
	1888	2693	705	121	1867	1988	6.1	93.9	
	1889	3131	793	153	2185	2338	6.2	93.5	
	1890	3546	991	153	2402	2555	6.	94.0	
	1891	4164	1272	193	2699	2892	6.7	93.3	
	1892	4449	1303	177	2969	3146	5.6	94.4	
	1893	4824	1414	180	3230	3410	5-3	94.7	
	1894	4111	1050	151	2910	3061	4.9	95.1	
	1885	4845	1212	142	3491	3633	3.9	96.1	
	1896	4878	1262	122	3494	3616	3.4	96.6	
	January	446	132	7	307	314	2.2	97.8	
	February	872	100	13	259	272	4.8	95.2	
	March	365	114	7	244	251	2.8	97.2	
	April -	352	90	• 11	- 251	262	4.2	95-8	
	May	437 .	111	7.	319	326	2.1	97.9	
96.	June	408	96	11	301	312	3.2	96.5	
1896.	July	564	115	20	429	449	4.5	95°5	
	August	372	86	11	275	286	3.8	96.2	
	September -	302	75	9	218	227	. 4.0	96.0	
	October	371	122	7	242	249	2.8	97.2	
	November	449	121	17	311	328	5.2	94.8	
	December	440	100	2	338	340	0.6	99.4	

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